

Surgery

Some Aspects of Hand Surgery

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Space limitations allow discussion in a superficial fashion of a few of the more important aspects of hand surgery. Many single portions of this subject deserve detailed description, but the broader title was chosen as a means of disseminating many ideas which might be valuable to those to whom the injured hand is often a problem.

Mistakes in hand surgery are costly to society and may be disastrous to the individual. Doing nothing to a patient may be as bad as doing too much. The correct action always undertaken at the correct time constitutes a perfection of judgment which no human can acquire, but heartaches would be fewer, and end results better if methods of treatment, dealing with conditions of the hand, were employed more efficiently. The object of this article is to stimulate better hand surgery. A few words on each of many aspects where improvement seems indicated will be more than enough to fill the allowable space.

The relegation of the initial hand injury to the class of minor surgery is a state of affairs which is only gradually being overcome. Scores of hands have been seen where greater care and skill in the original repair would have given a better immediate result than the most able late reconstruction can accomplish. Failure to make intelligent use of a tourniquet, to extend old, and to position new skin incisions to the best advantage, to properly place incisions in fibrous tendon sheaths, to observe common and volar digital nerve damage (even adding damage at times), to use splinting satisfactorily, to realize the value of medical reconditioning in relation to hand injuries (particularly in patients who are being compensated for an infirmity) all help to increase the incidence of permanent partial or total disability.

Preoperative Examination

Examine the hand carefully before operation. Do not be embarrassed by the necessity of tendon and nerve suture without suitable preparation. These are difficult operations under any circumstances. Use an arm-board or table. If the lesion is of the dorsum of the hand, have the patient in the prone position. This relieves an assistant of the necessity of holding the hand in pronation. Local (regional or block) or general anaesthesia may be employed depending on the case. It is sometimes advantageous to use a regional anaesthetic in order to have the patient's co-operation in hand and finger movements during the operation. Epinephrine from ampoules or rubber capped

bottles should be added to the procaine solution. If regional anaesthesia is used, approximately six drops of 1:1,000 epinephrine to one ounce of the 1% procaine solution is satisfactory. Cases have been recorded of gangrene of fingers ascribed to the use of epinephrine with local regional anaesthesia. No such case has been seen in my experience, but the warning cannot be entirely disregarded. It is possible that the gangrene has resulted from digital vessel injury when attempt has been made to block the digital nerves. It is not necessary to place the procaine in such intimate contact with the nerve that danger of injuring the digital vessels is incurred at the same time. The surgeon should make himself comfortable. Hand repairs are often long and tedious. Prepare the area widely—usually the whole hand and forearm. Soft soap and water or saline in large quantities followed by drying with a sterile towel and the application of the normally used antiseptic constitutes a routine preparation. The important part of this routine is believed to be the initial washing. If the area is greasy a detergent may be used. The nails are cut short. In some cases scrubbing with a sterile brush may be indicated. If there is an open wound, flooding of the part with water or saline is followed by a debridement. This debridement should be conservative in nature. Wide excisions leave defects which are difficult to close by ordinary means and result in unnecessary deformities.

Tourniquet

With general anaesthesia, a tourniquet is usually employed, not as an excuse to forget the anatomy of the part, but to ensure good visibility and a dry operative field. The latter minimizes the trauma of continual sponging. It is sometimes advisable to release the tourniquet before closing to identify bleeding points for ligation. It is occasionally wise to employ a drain for twenty-four hours to guard against the formation of a haematoma, although the judicious use of pressure with the post-operative dressing is very useful in this regard. A pneumatic cuff may be made more efficient if it is bandaged in position. This prevents slipping when the limb is changed in position. It is time consuming and annoying to find readjustment necessary during an operation. With a long procedure it may be deflated and inflated a number of times. Pneumatic tourniquets need constant observation as slow leaks are common. A very useful emergency type of tourniquet, if required only for a short period, is a length of sterile rubber tubing. This functions well if placed tightly about the forearm within the sterile field.

Some padding should be placed between it and the skin. It has the advantage of complete control by the surgeon but the disadvantage that on the forearm or wrist it causes flexion of the fingers due to compression of the muscles and tendons in that region. It should never be used for long periods. Rubber bands are useful for fingers. It seems needless to remark that the removal of the tourniquet is the surgeon's responsibility. If it is necessary to operate under tourniquet for many hours the tourniquet should be released approximately once an hour for about five minutes. If, however, one can complete the operative work in a period of one and a half hours, then it is quite safe to leave the tourniquet on throughout this time.

Incisions

Incisions must be planned carefully both in relation to skin and deeper tissues. Because of the danger of shrinking in scar tending to limit motion, long straight skin wounds from palm onto the fingers are usually to be avoided. The incisions of the fingers should be placed in a lateral position. If the change in direction of the incision is great, curves should be used rather than sharp corners. As palm and finger creases represent the lines at which motion occurs (these lines are skin joints), incisions should be made 2-3 Millimeters off such lines. There are other reasons for this. In the case of the interphalangeal creases, there is very little depth of tissue between the skin surface and the tendon sheath and tendon. Also if the hand is dressed in flexion, maceration occurs in the flexion crease due to contact of skin surfaces. The incisions in deeper tissue should take into particular account the nerves and tendon sheaths. Too little attention is paid to transection of the digital nerves in the hands and fingers. The common and proper volar digital nerves can be sutured with the expectation of enough recovery to warrant the time and trouble entailed. Free grafts from the external femoral cutaneous or sural nerve may be employed when loss of a section has occurred. Absence of sensation is one of the main reasons for a hand or any portion of it becoming a liability to its owner. If they are necessary, incisions of the annular fibrous sheaths of the flexor tendons should be made at the side. These fibrous sheaths act as pulleys to transmit force around curves. An incision down the centre of the anterior surface ruins the pulley and predisposes to adhesions between tendon and surrounding tissue with resulting loss of function. Because much of the effect of the amplitude of excursion of the tendons nullified by the short cut which is taken when the pulleys are absent, it is sometimes advisable in late reconstructive surgery to rebuild them. This is not an easy or a completely satisfactory undertaking.

Drainage Incisions in Fingers

Only a few words will be said concerning incision for drainage of infections and these will be limited to those made in the fingers. The so-called "fish or alligator mouth" type of cut for drainage of an extensive pulp space infection of the distal phalanx should rarely be used. In a number of such cases the tissues retract sufficiently to necessitate a further minor reconstructive operation at a later date. The single lateral incision, the "through and through" lateral incision, or the "hockey stick" incision possibly augmented by a lateral would give a sufficiently wide choice to obtain adequate drainage. If the tissues of the nail are incised for a subungual abscess, a wound of the nail matrix is to be avoided. This may give a permanent nail defect, such as a split nail. Instead of a scalpel, use scissors with one blade on the surface. Very often a paronychia is seen without a subungual abscess. The infection is confined to the soft tissue beside the nail on one side. The abscess is small and contains only a drop of pus. It may be opened easily without anaesthesia by nicking the roof of the abscess with a pair of pointed scissors. This releases the tension and gives immediate relief from the throbbing pain, at the same time providing adequate drainage. Palmar mid-line cuts for drainage of digital suppurative tenosynovitis are still seen. These incisions should be placed laterally, posterior to the nerve and vessels and as a rule on one side only. Severe hand infections are already rare and should become more so with the increased use of antibiotics and chemotherapeutic agents.

Amputation

Accidental amputation of a portion of the pulp of any of the fingers or thumb is a common accident. If the part removed does not represent full thickness of the dermis or if the full thickness portion is very small, the best treatment is a firm occlusive dressing such as one would place on a burn. The dressing is changed about once a week until healing has occurred. It is difficult and often impossible to estimate whether the injury has destroyed the full thickness of skin as the sweat glands in the palmar hand skin are numerous and situated deeply. Regeneration of surface can quickly take place from the epithelial cells of the gland elements. The tendency has been for too much surgery to be performed for these simple lesions. When much of the skin, or skin and pulp has been removed, either a partial or full thickness free graft or a small pedicle graft may be used. The free grafts are useless unless apposition of the graft to its bed is maintained. This is difficult for the inexperienced with the result that most of these grafts are lost. A bolus of cotton may be tied over the graft with sutures which have been left long at the graft edge—this ensures pressure and immobility. A simple pro-

cedure with a direct pedicle from the palm was described by Jones (R. S. Jones, American Journal of Surgery, 55, 326-338, February, 1942). This has the added advantage of supplying padding to replace the lost pulp.

With hand injuries, conservation of as much tissue as possible, or the addition (by grafting) of tissue may in general be advised. In actual practice each case must be judged on its own merits. The decision does not depend solely on the condition of the tissues (compound crush fractures affecting joint surfaces, tendon lacerations and nerve and skin injury), but also on the age, occupation and so on, of the patient. It is quite obvious that from an economic viewpoint, a musician might miss a finger much more than a painter. A finger, rigid in a particular position, might mean one man's livelihood and be a great nuisance to another. The thumb is especially important. Recently, a patient was seen in consultation concerning late reconstructive procedures, who had sustained an injury which avulsed the distal phalanx completely together with the skin from the proximal phalanx. The immediate treatment was amputation through the first metacarpal with a skin flap closure. While healing was by first intention, the result to be obtained by the surgeon attempting late reconstruction will not likely compare favourably with the result which could have been obtained if the original injury had been treated otherwise. An immediate direct pedicle graft would have been a simple matter. One should be ultraconservative with thumb amputations. Against this, it must be pointed out that a short, painless thumb stump is better than a long one with uncomfortable scar on its end. Palmar flaps should be used if possible, unless the obtaining of them necessitates amputation through the proximal portion of the proximal phalanx. Thumb stumps covered with thick insensitive pedicle grafts may be a liability. So-called opposition stumps consisting of bone grafts and pedicle flaps may demonstrate surgical agility but are often not indicated. The transfer of a finger with its nerve supply to take the place of the thumb, is a better but more difficult procedure.

Fingers which are without motion (stiff joints or inactive tendons) are a source of hazard in some industrial occupations and justifiably may be amputated. This is particularly so if there is associated nerve injury. Development occurring in hand surgery will lead to better results with small joint arthroplasties and tenoplasties. This will undoubtedly lead to fewer amputations. When an amputation is being considered in reconstructive work, the disability already present must be weighed against the result expected. A hand without one or more digits is not normal either in function or in appearance. An amputation is not necessarily a "cure-all." Standard amputations

are described in surgical text books with the technique used. It is my opinion that few finger amputations among workmen should be "standardized." They should take into consideration the future usefulness of the whole hand and the job that the patient will be expected to perform on recovery. Finger-tip injuries have been mentioned previously. If only a small piece of nail matrix remains, it should be removed as the distorted nail which forms is often troublesome. Amputations through the distal ends of phalanges rather than through joints are preferred as the expanded end of the bone does not leave as good a stump. If the interphalangeal joints are disorganized by comminuted fractures into them and the tendons are involved, it is not likely that motion will be possible beyond the metacarpophalangeal joints. In such cases, the amputation level is through the distal end of the first phalanx leaving a stump which does not project beyond the distal end of the other first phalanges. This is a good amputation for the middle and ring fingers, but not so good for the index and little fingers. In the latter case, the short first phalanx is not often useful and an amputation level at the metacarpophalangeal joint may be advised. A stronger hand is left if the heads of metacarpals are not removed. For the index and little finger, a better appearance may be obtained in metacarpophalangeal amputations if the distal end of the metacarpal is cut off obliquely removing most of the head, or if a large section of the metacarpal bone is removed. This is not recommended for those who have heavy labor to perform. Cosmetically also, the appearance of the hand can be improved by metacarpal transfer in metacarpophalangeal amputations of the middle and ring fingers. The fifth is transferred to the fourth in the case of the ring finger and the second to the third in the case of the middle finger. Such transfers add to the period of convalescence considerably. By lessening the width of the palm, they reduce the power of the hand in actions requiring leverage with a firm grip. Particular care should be taken in all finger and hand amputations to place the cut end of digital nerve in positions away from normal pressure points. To accomplish this, the nerve is freed and the end transplanted proximally and dorsally into the deep tissues away from usual contact points. At the time of amputation, if there is a soft tissue defect in the hand, it is occasionally useful to remove the bones (phalanges) of a finger leaving the soft tissue to fill the hand defect.

Splinting

When splinting is applied to a hand for any reason, care must be taken that it does not adversely affect the hand in some way. There are proper times, positions and conditions for splints, which subject will not be discussed in any detail.

One splint, however, will be mentioned as it appears in somewhat general use and in my opinion more often does harm than good. This is the so-called "banjo" splint. Traction through, and immobility of metacarpophalangeal and interphalangeal joints when in a position of full extension and when they are surrounded by and bathed in inflammatory exudate as a result of infection or trauma, is most inadvisable. This splint as in general use could be well discarded. In case of infections, the hand is put at rest in a "position of function" until the acute phase is over and then early motion is started. In the case of burns, the whole hand is splinted in a "position of function" until healing is advanced. In all cases the whole limb should be elevated.

The positioning of the thumb is important. It should be placed where at least the index finger tip can be brought into contact with its end. This means a position of abduction. This allows the finger to be flexed into the palm for other functions without being interfered with by a thumb which is stiff in a position close to the palm of the hand. A thumb, stiff, in an adducted position can have this condition corrected very often by an operation which detaches ligaments and muscle insertions at the ulnar side of the base of the first metacarpal bone. It may be necessary to combine this with an incision of the palmar fascia and the transverse carpal ligament to allow extension.

Splinting in the case of fractures must be individualized to the particular lesion. In general, it may be stated that immobilization should apply to the part affected only. The remainder of the hand should have continued motion.

The medical reconditioning of hand cases, particularly after late reconstructive procedures, is difficult. The patient needs much encouragement and for a time daily instruction. The most valuable physical therapy is the use of heat. Hot baths (water, paraffin) followed by passive and active motion of joints and exercises of muscles against resistance, are valuable. It is my belief that immediate forceful manipulation for stiff metacarpophalangeal and interphalangeal joints is usually harmful. Delayed or slow manipulation by spring splints or wedging plasters certainly has its uses and can yield astounding results on occasions, especially when tendons and muscles are involved in scar. Immediate manipulation may be indicated in hands with flexed fingers in which it is considered that there are light fibrous adhesions between tendon and tendon sheaths, limiting motion. This is not uncommon following a forearm or hand injury where fingers have been kept immobile in a flexed position for some time and the arm allowed to hang in a dependent position or when inactivity has been allowed following a nerve injury with forearm muscle paralysis. With ordinary forms of physiotherapy and occupational

therapy the patient becomes tired of the apparently unproductive repetition of effort. "Productive gainful employment" which has to be supervised to ensure that the damaged part is used in a manner designed to improve function, should occupy a considerable part of the reconditioning programme. The limitation of small joint motion in hands without obvious tendon and tendon sheath abnormality may also be improved as a late procedure by capsulotomy, capsulectomy, and in cases of bony ankylosis, by arthroplasties. The latter have not been too successful, particularly for interphalangeal joints, but there is hope of improvement.

Post Traumatic Reflex Dystrophy

Whenever a large number of cases requiring hand reconstructive surgery are examined, many are seen which have nutritional changes. These may follow peripheral nerve damage, soft tissue injury with much scarring and contracture, or prolonged immobilization with or without splints. These nutritional changes may be explained readily by diminished circulation. A few patients are seen which have little understood conditions associated with nutritional changes, and in whom a complaint of pain or discomfort is the dominating feature. Some writers call these latter cases "post-traumatic dystrophies" for want of a better collective term. Sudeck's osteoporosis is included. As a subjective symptom, a burning type of pain may be present of different intensities. Thus the word "causalgia" is often used as the name of the condition. It would be better to drop this term or to use it descriptively in discussing the type of discomfort. Thinking on the subject is very confused for most doctors and a clarification of terms is much needed. The subjective complaint of "causalgia" is accompanied by many other findings varying in degree of intensity—apprehension of the patient concerning having the hand touched, holding it rigidly with the metacarpophalangeal joints flexed and the interphalangeal joints usually extended with the fingers together and the thumb adducted—nutritional changes in the skin and the whole hand—discolouration due to vascular change and often excessive sweating of the hand. These phenomena are due to neurovascular dysfunction. Such a hand is useless and in time, due to structural (joint, etc.,) changes becomes permanently disabled. The pain may spread and involve the whole limb (and even the opposite limb).

The reason for mentioning the lesion is, because it seems to be almost wholly unrecognized by the average practitioner. When it occurs, treatment should be started early and with such understanding as exists, in order to obtain the best result. Various explanations have been given depending on axon reflexes, reflexes to the cord from special nerve receptors in tissues and the nocifensor system of nerves propounded by the late Sir Thomas

Lewis (British Medical Journal, February, 1937). The severity of the complaint seems to vary regardless of the severity of the traumatic lesion. This may be explained at least in part by the variation of reactivity of individuals to discomfort. Whatever the cause when the condition is established, the treatment which has been most successful has been based on breaking the reflex arc—by splinting to protect against further noxious stimuli, by procaine injection, by surgical intervention and by psychotherapy. Many cases can be cured simply. Some cases are resistant to all forms of known therapy. The procaine injection may be given locally in a so-called "trigger area," or at a distance along nerves or vessels supplying the area, or in the trunk to affect the sympathetic ganglia. Treatment should be instituted early, should be intensive and under expert observation and understanding guidance.

Tendon and Tendon Sheath Injury

Probably the most serious case of disability in hands is the loss of the normal gliding mechanism of tendons. Very often with tendon injury there are associated lesions to nerves and other soft tissues and even bones and joints. These may contraindicate the employment of any complicated method of treatment unless the results from it are very surely good. For example, many would agree that the most simple and satisfactory method of treatment for a labourer who has lost the power to control movement of a finger is amputation of that finger.

Among the many unsolved surgical problems is the satisfactory restoration of the ability to translate the power of the forearm muscles into movement of the fingers after injury to the mechanism which takes care of the transmission of this power. This mechanism consists of tendon, tendon sheaths and pulleys. These long tendons have a wide amplitude of excursion. Where the surrounding tissues are relatively immobile, they move by sliding in a tunnel or sheath. The nutrition of the tendon in such a location is maintained by vessels which run in a mesentery or vincula. The sheath is reflected off the tendon via the mesentery to the walls of the tunnel and at the ends onto the surrounding tissues. Unless the end of the sheath is at the insertion of the tendon it has considerable play and has a concertina action on itself when the tendon moves. The sheath is composed of fibrous tissue cells arranged in a manner so as to form a smooth sliding surface. It is reinforced by dense fibrous tissue in parts of its course so that it does not take a short cut, riding away or standing out like a guy rope when the joints are angled. Such an action renders the amplitude of excursion inefficient sometimes for the transmission of motion from the origin to the insertion. The tendons whose function is most seriously affected by injury are the flexors of the fingers and thumb. Further-

more, the commonest disabling injury is accidental tenotomy in the area from the distal palmar crease to the proximal finger crease. In this region the function lost is the ability to flex the interphalangeal joints. The metacarpophalangeal joint can usually be flexed fully by the lumbrical interosseous apparatus. The loss of function is due to the loss of the sliding between tendon and tendon sheath. As the posterior part of the tendon sheath is closely associated with and firmly adherent to the proximal two phalanges in this region, any adherence between tendon and sheath on this surface completely eradicates function. Many severely crippling lesions of this nature are seen.

At the time of the initial injury if there is reason to expect first intention healing on suture, then the tendon repair may be performed. If there is doubt concerning primary healing either due to the length of time between the accident and the operation, or because of the nature of the injury, then a closure of the skin only may be performed with a secondary tendon suture in seven to ten days, if the wound heals cleanly. Many techniques have been described for end to end apposition and suture of a tendon. If the flexor sublimis tendon alone is damaged, as a rule no suture is performed. If both the sublimis and profundus tendons are cut, then the sublimis is sacrificed and the latter sutured. When the laceration is between the distal hand crease and the distal interphalangeal crease, then a free tendon graft or a tendon advancement operation will likely be necessary to ensure some motion of the interphalangeal joints. The most important factor in lessening stress is to position the wrist and finger in the convalescent period. The wrist should be slightly less than full flexion in the case of flexor tendons and vice versa for extensor tendons. Rest is maintained for eighteen days. Then gentle pull is started rapidly increasing in strength over a few days. The active motion will be very little at first and the patient needs to be educated in the type of exercise to be undertaken. Improvement will occur up to six months or more. If the tendon is stuck, it may be freed at a separate operation, often with some benefit. If the patient is seen for the first time one to two months after the accident, it is advisable to think in terms of a free tendon graft. So much shortening has taken place that it is difficult to perform a satisfactory suture without great flexion of a finger. The free graft is obtained from the palmaris longus in the forearm or from the foot extensors. If there is much scar present, the area has to be prepared by skin flap replacement before there is any thought of using a free tendon graft.

Fractures

Very little will be said concerning fractures. Metacarpal fractures with displacement are best

treated by the method described by Waugh and Ferrazzano in 1942. The fracture is accurately reduced by manipulation with the metacarpophalangeal joint and interphalangeal joints flexed to 90° angles to tighten the collateral ligaments and relax the interosseous muscles. This allows control of the distal fragment. The fracture is reduced by direct compression. Reduction is maintained by semi-rigid wire or wires, drilled transversely through the distal ends of the fracture and adjacent one or two metacarpals. A light plaster of Paris cast is applied to the hand and distal half of the forearm. The fingers are not incorporated and motion of all joints is begun immediately. Immobilization is maintained for three to five weeks.

Fractured phalanges are treated in various manners depending on the type of fracture, the particular phalanx involved and the associated injuries. If no displacement is present, simple splinting with a small padded metal splint or by firm bandaging and adhesive strapping is sufficient. If displacement is present, reduction and immobilization by a padded metal splint beginning above the wrist with 45° flexion of the metacarpophalangeal joint and 90° flexion of the proximal interphalangeal joint and 45° flexion of the distal

joint with gentle pulp traction, is often satisfactory. It may be advisable to maintain reduction with semi-rigid wire insertion (fine Kirschner wire either drilled longitudinally or by two crossed wires, or by direct wiring with fine stainless steel wire).

Such a short resume does not in any way cover the subject, but the impression which it is desired to leave is that the small long bones of the hand need reduction just as much as a fractured leg. Comminuted phalangeal fractures with involvement of the flexor tendon sheaths may leave immovable interphalangeal joints. Motion should be continued in all other than the injured part of the hand and here as soon as possible.

In conclusion, the greatest improvement in results from hand injuries and infections can be obtained by increasing the knowledge of the general practitioner and "occasional" surgeon, concerning these conditions. A great deal of the late reconstructive work would either not be necessary or would be made easier if certain simple "don'ts" were observed in early therapy. This will save much disability and lessen the burden to the nation which is imposed by the large number of hand injuries requiring pension awards.

Medicine

Positive Serological Tests for Syphilis in the Absence of Syphilis

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Ever since it was shown in 1910 that the antigen employed in the flocculation and complement deviation tests for syphilis need not contain the bodies or any other part of the *treponema pallidum* the specificity of these tests has been under a cloud. During the first quarter of the twentieth century the sensitivity of these tests was kept at a low level because it was considered that a considerable amount of the reacting substance should be present before a positive report was made and the technical difficulties of maintaining a high degree of sensitivity had not been overcome. As a result of the low sensitivity of the test, the presence of a relatively large amount of syphilis and because the physicians only sent to the laboratory sera from cases which they thought might be positive, the percentage of positive reactors who had not syphilis was very small. In the last fifteen years most laboratories have increased greatly the sensitivity of their serological tests for syphilis and this has been particularly evident in the laboratories of the North American Continent, while during the last twelve years the number of sera received for testing has increased in most laboratories at least tenfold. As a result of all these changes the lack of specificity of the test

has become manifest. ¹Opwood Price, writing in The British Medical Bulletin, states that "figures for biological false positives range around one per cent in routine testing in Great Britain but in other countries seem to be much higher," while Stokes and James, reviewing the subject in The American Journal of Syphilis, Gonorrhoea and Venereal Disease, say that "among positive reactions forty per cent may be biological false positives but that if all sera received for testing are considered only about one serum in seven hundred give this type of result." Whether these figures be unduly pessimistic or not their publication by such well recognized experts makes clear the magnitude of the problem of interpreting the results of routine serological tests for syphilis as they are performed at present. It is perhaps unfortunate that the problem is one which presents itself more frequently to those concerned with medicine in general than to the professional venerologist. In this article the position is presented from the point of view of the bacteriologist who undertakes the tests and who is not infrequently asked to interpret the results of his test. There are two broad groups which for want of a better name are often called false positive reactions. I think that it is important to remember that this is really a misnomer. The test itself is a true positive. It is almost always indistinguishable in the test tube from a known positive due to syphilis and the degree of positivity

may, and usually does, fall within those limits found in known cases of syphilis. Just occasionally the test is so strongly positive that syphilis can be ruled out on this alone; but in most cases the degree of positivity is of no value in assessing the results. The two large groups of these anomalous results are:

1. Those produced by other diseases.
2. Those for which no cause can be found.

The first group while probably a little commoner than the second is usually not too difficult to recognize if one has the full medical history of the patient before one. In the past the list of diseases which have been said to give rise to false positives was legion and even today it is very difficult to decide which diseases do deserve the doubtful privilege of being included in this class. It appears proven that yaws gives as frequent positives as syphilis itself. Active malaria gives a reaction to most of the serological tests for syphilis in from 20 to 40 per cent of cases. Filariasis and kala-azar are said to react in a like manner. After this comes the very large group of diseases which are said by different workers to give false positive tests for syphilis but these opinions generally have been based on rather meagre experimental evidence. It is certain that any increase in body metabolism can give rise to false positives and for this reason sera for testing for syphilis should not be taken during the acute phase of a disease, particularly if the patient is suffering from any degree of pyrexia. The disease that the writer has found most consistently giving reactions with the Kahn and Wassermann tests is pneumonia in general, but more especially the type called atypical pneumonia. In pernicious anaemia, when the anaemia is considerable, and even more frequently during crude liver extract treatment for this disease, false positives may occur. Active tuberculosis, particularly of the lungs and kidney, may upset the type of globulins and albumins found in the blood, so this disease and also multiple myelomatosis may make the diagnosis of syphilis difficult or impossible by serological test since however often the test is repeated anomalous results may be found, even when the patient has syphilis. It is widely stated that infectious mononucleosis gives positive results with tests for syphilis. Although this may be true with some techniques the writer has tested very many sera giving a positive Paul-Bunnell reaction and has failed to find one which gave an unequivocal positive reaction. It is also widely stated that injections of typhoid vaccine, vaccination against small pox, and in fact almost any parenteral protein injections upset the results of serological tests for syphilis. Most of these statements rely for their veracity on but a small series of cases. Even so it is inadvisable to trust a positive reaction on a specimen taken within a month

of any of these procedures. All allergic reactions, and in fact many other disorders of the epidermis, particularly psoriasis, give rise to atypical serological reactions. However much of a nuisance this type of false positive may be, it is not of serious import if the physician is on the look out for it and is careful to assess all aspects of the case before diagnosing syphilis in the presence of one of the afore-mentioned conditions.

False positives of the second group are much more troublesome. They are usually found during routine examinations of blood for Life Insurance, Visa, Premarital blood tests or other routine examinations conducted in the absence of obvious disease. They are extremely important since untold harm can be done by labeling someone as syphilitic who has never suffered from this disease.

Let us consider for a moment the significance of laboratory reports on bloods which react with some or all of the standard tests. If the case is a known one of syphilis or if the clinical diagnosis would be syphilis in the absence of a serological test, then the degree of positivity of the test may be taken as a guide to the activity of the disease. If the history is suggestive of syphilis and the serological tests consistently positive it is probably safe to make a diagnosis of syphilis even in the absence of physical signs of active disease. The difficult cases to assess are those in which there is no history of infection, no symptoms of syphilis, and no evidence of the presence of other diseases, but whose sera give a positive serological reaction for syphilis. In these cases the type of report issued from the laboratory may be of considerable help to the physician who is using one laboratory for all his serological tests for syphilis. It is the writer's opinion that syphilis should never be diagnosed on a single serological test or a single specimen of serum. Thus, if the flocculation tests are positive and the complement fixation tests are negative or vice versa, the tests cannot be said to support the diagnosis of active syphilis. It is true that this type of reaction may be found in very early syphilis but even if there is no chancre present the rapidly rising titre on subsequent tests makes the diagnosis clear. Most laboratories maintain their flocculation and complement fixation tests at a fixed ratio of sensitivity and then a reversal of the expected degree of positivity in the two types of tests should give the physician food for thought. In the absence of treatment the blood of a patient suffering from syphilis, except in the earliest stages, shows a remarkably constant level of reacting substances, therefore it is unwise to diagnose syphilis in the absence of clinical evidence of the disease if there is any gross change in the results received from the laboratory. In all cases of this type repeated serological tests should be carried out at fairly

frequent intervals, perhaps every fortnight or month for the first six months and then every three months for the next two years or until the diagnosis becomes clear. By this procedure, not infrequently, a sufficiently large number of negative results will be found to rule out the diagnosis of syphilis. Finally there is the question of whether or not by giving an adequately large dose of penicillin to cure syphilis a diagnosis may be made in retrospect. The writer feels that this should not be done because penicillin is capable of curing many other conditions than syphilis, and as stated previously, parenteral injections of any kind may affect the serological tests for syphilis.

Thus the position at present is that the attending physician must, after considering all the relevant facts, make up his own mind whether or not his patient has syphilis. It is just possible that in the not too distant future, provided ³Nelson's Treponema Immobilization test lives up to its early promise, the laboratory will be able to give a much more reliable opinion on the chances of a patient having latent syphilis than it can today.

References

1. I. N. Opwood Price, British Medical Bulletin, Vol. 7, 3:204, 1951.
2. H. J. Stokes and G. W. James, American Journal of Syphilis, Gonorrhoea and Venereal Diseases, 33: 114, 1949.
3. Nelson, R. A. and Mayer, M. M., J. Exp. Med., 89: 369.

Poliomyelitis Review, 1951*

Winnipeg Municipal Hospitals

E. F. Taylor, M.D.

Though it is said that figures never lie, the ones presented here today may not be telling all the truth.

Minor cases of poliomyelitis are frequently overlooked and we learn from the Provincial Health Department that the first case of poliomyelitis of this year occurred in Winnipeg on March 5 but was not reported to them until late in June. The second developed about seven weeks later on April 23 at Thalberg. The patient lived on an isolated farm, had not been off the same for three weeks and knew of no one ill in the district. On admission to the King George Hospital on April 29, history and examination revealed the classical signs and symptoms of poliomyelitis, namely, headache, rigidity of the spine and an increase in the spinal fluid cells—300 to the cu. m.m., polymorphs 40% and lymphocytes 60%. But, as we are not yet accustomed to accepting poliomyelitis in the cooler months of the year, specimens of blood and feces were sent to the Provincial Laboratory for examination. The tests were negative for Western Equine Encephalitis and Choriomeningitis. The specimen sent to be examined for Coxsackie Disease met with misadventure. This patient did not develop paralysis and was discharged from hospital at the end of ten days. On May 28 the third victim became ill but was not reported till three months later.

Apparently the disease was latent during June. In July five persons—three in Winnipeg, one in Brandon and one in Woodworth—contracted the disease but again were not reported till later. Thus, it was not till the middle of August that we recognized that an epidemic was once again in

our midst. During the last two weeks of August four patients were admitted to the King George Hospital from the environs of Headingley and one from Selkirk town. Throughout September and October, when an epidemic is usually on the wane, single cases were diagnosed in rural areas, villages and towns as far north as The Pas and as far west as Souris. There were none to the south of Winnipeg, none to the east. A small number of cases developed at Foxwarren, Headingley, Teulon and Winnipeg.

Now in retrospect we may ask why there should be a group of six at Foxwarren where the patients were so far apart they did not know each other, and only one at Shilo Camp. Or why we have much the same picture at Teulon and only two from a Hutterite colony where the contact must have been much closer. Perhaps in the future, our next research party may be persuaded to forsake the blue waters of the Hudson Bay with its shimmering dome of dancing lights and pitch their tents on one of those isolated Manitoba farms and learn, first: whether in reality the womenfolk do not leave their homes for weeks at a stretch; and, second: if they do not, where is the contact and where the breakdown in the forces of defence.

Leaving the map and the geographical distribution and coming to the patient himself, there were a few differences between this epidemic and former ones, if we omit the Esquimaux.

In other years, approximately 40% of the cases referred to this hospital were of the abortive type. Either that type did not occur this year or the physicians were kinder to us, for those sent to the hospital with a diagnosis of poliomyelitis had that diagnosis confirmed in at least 95% of the patients, as will be learned in Table No. 1. Of the forty-one cases reported in the Province until November 10, nineteen were admitted to the King George Hospital. For ease in arithmetic these have been considered as twenty.

*Presented at the Winnipeg Municipal Hospitals at a clinical luncheon, Dec. 29, 1951, with presentation of cases.

Table No. 1
Signs, Symptoms and Paralysis, 1951

Signs and Symptoms	
Prodromal Hump	15%
Trauma	0%
Hoarseness	5%
Heaviness of limbs	5%
Lethargy	5%
Headache	25%
Sore throat	20%
Emesis	50%
Pain—back and limbs	80%
Paralysis	
Cranial nerves	50%
Neck and arms	70%
Abdominals	45%
Back	20%
Lower limbs	60%

The history of trauma had to be delved into very carefully this year in order to fill out the questionnaire that the Provincial Health Department so thoughtfully issues when an epidemic occurs. No history of an injection within six weeks prior to admission could be obtained from any of the patients.

Complaints of a "cold" represented the prodromal hump or the minor illness as it is now called. The hump preceded the major illness by six to nine days and occurred in 15% of the patients. Hoarseness, lethargy and heaviness of the limbs were complaints in 5%. In the patient complaining of heaviness of the limbs, which started in the fingers and toes and proceeded cephalad, a diagnosis of Guillain-Barre's syndrome was considered and discarded. Cephalagia was not as bitter a complaint as formerly. One would always have to inquire about a headache, the information was not volunteered. The incidence of sore throats, emesis and pain differed little from previous experiences. The sex distribution was as evenly divided as an odd number of cases allows. Two-thirds of the patients were under sixteen, the youngest aged twenty-two months; among the adults, the oldest was forty-one. As to the moot question of tonsillectomies increasing the susceptibility, among those who had cranial nerve involvement, four had had their tonsils removed, four still retained them and no one had been observant enough to note the presence or absence in the ninth. Urinalysis, blood counts and spinal fluid findings have not been listed as they did not differ from further epidemics.

Table No. 2
Comparison Between Previous Epidemics and Present Epidemic:

	Previous Epidemics	Present Epidemic
Initial paralysis	30-40%	95%
Residual paralysis	15-20%	95%
Mortality rate	3-5%	15%

It is when one compares the mortality rates

and the residual paralysis that a wide variation is seen. The death rate in the King George Hospital was tripled this year, but one must remember that the number of cases was smaller.

The mode of death differed in each of the three fatal cases. The first, a woman of twenty-six, was admitted complaining of difficulty in swallowing and shortness of breath. She was placed in the respirator and oxygen and suction started. Little or no relief was secured and she died ten hours later from respiratory failure. The second was a young boy of eleven years whose chief complaint on admission was the inability to swallow. In a few hours he became cyanosed and comatose. He, too, was put in the respirator and oxygen and suction administered. Relieved by suction, he was able to breathe without the respirator and he was removed. The coma continued to deepen and the patient died five days after admission. The third was a man who walked into the admitting room drooling, unable to swallow or close his mouth. As suction was sufficient to relieve him, he was not placed in the respirator. The breath sounds could be heard clearly from apex to base, the arterial blood oxygen saturation was 88% and he remained a good color till within a few hours before he died. His death, four days after admission, was thought to be due to heart failure.

The residual paralysis previous to 1951 varied from 15% to 20%, increasing by one-half to one per cent with each epidemic. This year the residual paralysis is 95%, varying from a weakness that only the patient or trained personnel can detect to two who are bed-ridden. The cranial nerve paralysis was high and the lower limb paralysis this year exceeded the paralysis of the upper limbs.

We have nothing new to offer in the way of treatment. In the past few years an effort has been made to re-educate those muscles necessary for the production of speech. Not only do the patients learn to speak from diaphragm to lips, enunciating clearly, but we think the accessory muscles of respiration are also strengthened. Our one complete failure in this exercise was a rugged individual from the country who thought he would suffer less torment from his friends if he had to write his requests than if he returned to them with what he considered a "plush" accent.

As was said in the beginning, Figures never lie, but these presented today may misrepresent the truth. Have we had a wide-spread epidemic which has not been recognized? Has the physician sent to hospital only those patients whom he knew would develop paralysis? A supposition that is not acceptable! Have we a more virulent virus and are we to meet this devastation another year? Someone in the audience who may have seen the other cases not admitted here may be able to paint a brighter picture than the one presented this afternoon.

Relationship Between Inoculations and Poliomyelitis*

The state and Territorial Health Officers Association requested the U.S. Public Health Service to sponsor a study and issue a clarifying statement on the possible relation between various types of inoculation and poliomyelitis. Subsequently, the Public Health Service, on March 14, 1952, sponsored a meeting of 42 poliomyelitis investigators, epidemiologists, pediatricians, allergists, and health officers. The National Foundation for Infantile Paralysis participated in the conference and helped in planning it.

The conference voted unanimously in favor of the conclusions contained in the following statement, which has been accepted by the Public Health Service and is being transmitted to official health agencies, to the medical profession, and to the public:

"There is no definite evidence that an increase in the number of cases of poliomyelitis has occurred as a result of injections of vaccines, drugs, and other medicinal agents. There is evidence that injections for the prevention of diphtheria, whooping cough and possibly tetanus, when given during an epidemic of poliomyelitis, may, on rare occasions, localize the paralysis in the inoculated arm or leg. There is no satisfactory evidence that other types of injections have any effect on the localization, frequency or severity of poliomyelitic paralysis. In the small number of persons with localization of paralysis in the inoculated limb, the injections, for the most part, were given about 7 to 21 days prior to onset, which corresponds to the usual incubation period of poliomyelitis. This has raised the question as to whether or not inoculated persons have a greater chance of contracting poliomyelitis during an epidemic.

"There is as yet no final answer to this question, but it is a fact that, even if there should be an increased chance, it is extremely small. Many

thousands of poliomyelitis cases occur every year among children who have not had any injections during the preceding few months, and thousands of children have received injections for whooping cough, diphtheria and tetanus during poliomyelitis epidemics and have not developed the disease.

"Diphtheria, tetanus and whooping cough are serious diseases which can be prevented by immunization. Unchecked these diseases present a far greater hazard than poliomyelitis. The benefits derived from immunization against these diseases far outweigh the questionably small increased chance of contracting poliomyelitis. However, even this questionable risk can be avoided by carrying out these immunizations when poliomyelitis is not epidemic in the community. There appears to be no good reason for withholding these immunizations during the summer months in communities that are not having an epidemic of poliomyelitis.

"Furthermore, poliomyelitis is at all times so rare in infants under 6 months of age, and the danger from other infectious diseases, particularly whooping cough, is so great, that it is advisable to continue the immunization procedures for this age group even during a poliomyelitis epidemic. In adults also, poliomyelitis is relatively so infrequent, that when there is a need for immunizing or therapeutic injections, such injections should not be withheld.

"Certainly no parent should object and no physician should hesitate to administer a needed antibiotic, drug or other injection for treatment of disease at any time. When there is immediate danger from diphtheria, whooping cough or tetanus, the preventive inoculations should be given to all threatened age groups even during a poliomyelitis epidemic. In the final analysis the decision as to when an immunizing or therapeutic injection shall be given to an individual patient must rest with the physician."

*Reprinted from the J.A.M.A., 147: 170, May 10, 1952.

Obstetrics

The Physiology of Reproduction The Endocrine Glands and Their Secretions

From the Faculty of Post-Graduate Studies of the Winnipeg
General Hospital in the Department of Obstetrics and
Gynaecology.

Section "B" No. 3

Ovary

Obstetrics and Gynaecology Fellowship Lectures
Harley Hughes, M.D.

Question:

Describe the gross and microscopic structure, blood supply, lymphatic drainage, and development of the ovaries.

Gross Structure

The ovaries, two in number, are homologous with the testes in the male. They are situated one on each side of the uterus in relation to the lateral wall of the pelvis and attached to the back of the broad ligament of the uterus behind and below the uterine tube.

It is important to realize the gross appearance of the ovary in health, otherwise the surgeon may (and not infrequently does) remove a normal organ. Each ovary is a solid, elongated, flattened body, resembling an almond with its shell intact. It weighs from 4 to 8 grams and measures 2.5-5 cms. in breadth. The right ovary is usually somewhat larger than the left. The color of the ovary ranges from greyish-pink to reddish-white. The surface is either smooth or much more commonly puckered and uneven. It usually presents bosses (which are follicles and corpora lutea) separated by fissures and scars. Most of the surface is covered by glistening peritoneal mesothelium, but this changes to a lustreless surface (germinal epithelium) along the white line which marks the hilum of the ovary i.e. the site of attachment of the mesovarium. The cortical zone contains ripening Graafian follicles forming cysts of varying size, sometime up to 1.5 cms. in diameter. Still larger, and often mistaken by the ignorant for a pathological lesion is the corpus luteum. In some cases it may occupy one-third of the ovary. The centre is filled with fresh blood and the wall is of a characteristic bright yellow color and an equally characteristic wavy convoluted outline. The remaining portion of the ovary on cross section presents a firm, greyish-white, homogenous appearance.

After the menopause, the ovaries are small, hard and fibrous, often deeply fissured and scarred.

In the erect posture, the long axis of the ovary is vertical. Each ovary presents a lateral and a

medial surface, a tubal and a uterine extremity and a mesovarian and free borders.

The ovary lies in a depression, named the ovarian fossa, on the lateral wall of the pelvis; this fossa is bounded in front by the obliterated hypogastric artery and behind by the ureter and the uterine artery. The exact position of the ovary has been the subject of considerable difference of opinion and the description here applies to that of the nulliparous woman; the ovary is displaced during the first pregnancy and probably never again returns to its original position. The tubal extremity (*extremitus tubaria*) is near the external iliac vein; to it are attached the ovarian fimbria of the uterine tube and a fold of peritoneum, the suspensory ligament of the ovary which passes upwards over the iliac vessels and contains the ovarian vessels and nerves. The uterine extremity is attached to the lateral angle of the uterus immediately behind and below the uterine tube by a rounded cord termed the ligament of the ovary which lies within the broad ligament and contains non-stripped muscular fibres. The lateral surface is in contact with the parietal peritoneum which lines the ovarian fossa and separates the ovary from the subperitoneal connective tissue and the obturator vessels. The medial surface is to a large extent covered by the uterine tube. The mesovarian border is straight and is directed towards the obliterated hypogastric artery; it is attached to the back of the broad ligament by a short fold named the mesovarium. Between the two layers of this fold the blood vessels and nerves pass to the hilum of the ovary. The free border is convex and is directed towards the ureter. The uterine tube arches over the ovary, running upwards in relation to its mesovarian border, curving over its tubal extremity and then passing downwards on its free border and medial surface. (See Fig. 1).

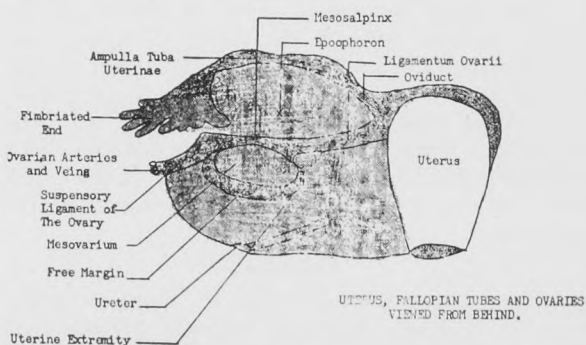


Figure 1

During pregnancy the ovary is carried upwards with the enlarging uterus into the abdomen and

subsequently its position in the pelvis is open to considerable variation, although it always remains anchored by the ovarian ligament, the infundibulopelvic (suspensory ligament) and the mesovarium.

If the uterus assumes a position to one side of the midline, the ovary of the opposite side is pulled out of the fossa. In multiparae it is usually outside and behind it. When the body of the uterus is posterior, the ovary is likely to be prolapsed behind it.

Microscopic Structure

In the adult ovary there are two distinct zones, a cortex and a medulla.

The cortex contains ovarian follicles in the various stages of development or of atresia; corpora lutea derived from ruptured follicles may also be present, and usually there are areas of dense scar tissue which remain after they are completely degenerated, corpora albicantia. These structures are embedded in a vascular and densely cellular connective tissue (ovarian stroma).

In the medulla there are no follicles and the stroma is looser. Many large branches of the ovarian arteries and veins are crowded closely together and occasionally in very young subjects cellular strands, the remains of the rete ovarii, can be recognized. The medulla surrounds the hilus and is continuous through the mesovarium with the epoophoron. The ovary is covered by a layer of cuboidal cells (germinal epithelium) which terminates at the margins of the hilus where it joins the coelomic mesothelium. Beneath the germinal epithelium, the stroma is condensed into a dense white inelastic capsule, the tunica albuginea.

Germinal Epithelium

The germinal epithelium is the epithelium covering the free surface of the ovary. In the infant it is a simple cuboidal or columnar epithelium. In the adult its cells gradually become lower and are sometimes flattened when put under tension. A basement membrane between this epithelium and the underlying connective tissue cannot be detected.

The thick peripheral layer or cortex of the ovary situated beneath the tunica albuginea and surrounding the medulla (zona vasculosa) except at the hilus contains the follicles in its interstitial connective tissue. The ova or female sex cells develop in these follicles. When the follicles reach maturity they rupture on the surface of the ovary and the ova gain access to the open end of the oviduct.

Follicles

The younger the individual, the more numerous are the follicles. The only accurate investigation as to their number is that of Haggstrom (1921) who estimated 520,000 in the two ovaries of a 22-year-old girl. Only 0.5% of this number had begun to develop. Most of the Graafian follicles and 12,000

primordial follicles were atretic. The number of follicles decreases progressively throughout life and at the menopause they are hard to find. Most of this decrease is due to atresia. A few may persist even in old age.

Primary Follicles

The vast majority of the follicles are primary follicles. They are found mainly in the periphery of the cortex and in young individuals they form a thick layer immediately below the tunica albuginea. They are probably the source of all the other follicles in primates. The primary follicles are spheroidal bodies about 45 μ in diameter. The centre is occupied by the large round egg cell or ovum. Its vesicular nucleus has a slightly eccentric position and contains a loose network of linear threads with small chromatin granules and a large chromatin nucleolus. At that side of the nucleus with the large amount of cytoplasm is an accumulation of small mitochondria, the cytocentrum and the Golgi net. The ovum in the primary follicle lacks a membrane; it is separated from the adjacent interstitial tissue by a single layer of flattened follicular cells, 7 to 10 of which appear in section.

Growing Follicles

The progressive development of a primary follicle consists in growth and changes in the ovum, follicular cells and the adjacent connective tissue.

As the egg increases in size, its nucleus enlarges and the mitochondria become more or less evenly distributed in the cytoplasm. Later yolk granules of two kinds appear. When the ovum reaches a diameter of 60 to 80 μ a refractile, deeply staining cell membrane appears. It is called the zona pellucida and is probably elaborated by both the ovum and the surrounding follicular cells. It gradually gains in thickness. The growing follicle enlarges mainly through the mitotic proliferation of the follicular cells. (See Fig. II).

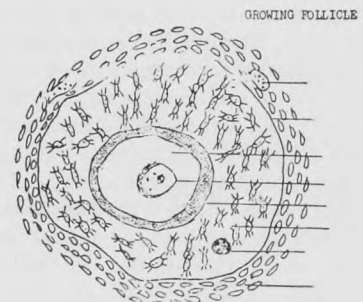


Figure 2

When the follicle is about 0.2 mms in diameter several irregular spaces filled with the clear liquor folliculi appear between the follicular cells. The separate cavities usually flow together and the

resulting vesicle has a stratified epithelial lining of follicular cells which is thickened on one side. This is the cumulus ophorus which surrounds the ovum. (See Fig. III).

In growing follicles, round darkly staining bodies (of Call-Exner) surrounded by follicular cells may be found. These probably represent new centres of secretion of follicular liquid. (See Fig. II).

Meanwhile the connective tissue surrounding the growing follicles differentiates into a capsule, the theca folliculi which is separated from the follicle by a basement membrane. Later this capsule becomes sub-divided into two layers. In the theca interna the layer immediately surrounding the basement membrane, an increasing number of blood capillaries develops and when the follicle has become a vesicle of 2 to 3 mms. the connective tissue cells increase in size and become loosely arranged. The theca externa or outer layer keeps its dense structure of concentrically arranged, fusiform cells and thick fibres. As the follicle continues to enlarge, these layers become more and more prominent. There is no sharp limit between the two layers of the theca or between the theca externa and the surrounding stroma. (See Fig. III).

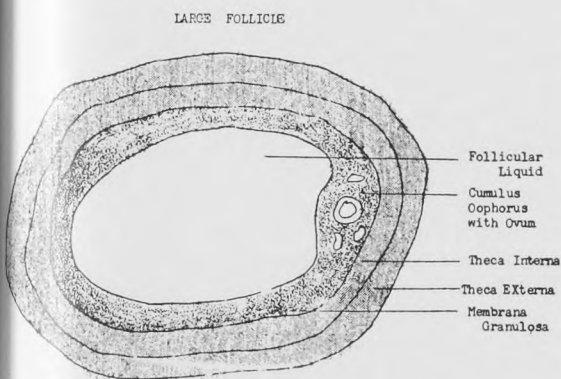


Figure 3

The follicle continues to grow due to the rapid mitotic proliferation of the follicular epithelium and to the progressive accumulation of the follicular liquid. If a follicle is to reach maturity and rupture, it must gradually extend toward the free surface of the ovary. The cause of this is probably the eccentric development of the theca interna which is thicker and looser on the outer side of the follicle.

Mature Graafian Follicles

The mature follicles are large vesicles which occupy the thickness of the ovarian cortex and bulge on the free surface of the organ. The liquid in the follicular cavity is under considerable pressure and the outer part of the wall is very thin.

The protein containing follicular liquid appears finely granular in fixed sections. The follicular epithelium lining the cavity is often called the membrana granulosa and is intimately adherent to the glassy membrane which separates it from the connective tissue capsule (or theca) of the follicle.

The connection of the ovum with the membrana granulosa is loosened by the development of new liquid-filled intercellular spaces in the cumulus.

A layer of columnar follicular cells remains attached to the ovum; near maturity these cells become tall and conspicuous, forming the corona radiata which is believed by some to have protective and nutritive functions similar to those of the Sertoli cells in the testes.

The ovum in the mature follicle reaches a diameter of 120 μ or more. Its surface is immediately surrounded by a thick membrane—the zona pellucida or oolemma. The cytoplasm of the ova contains some yolk granules, but its peripheral layer is clear in fixed section.

The eccentric nucleus (vesicula germinativa) measures 25 μ in diameter, has a thick membrane, a slightly granular linen network, and a large chromatin nucleolus — the macula germinativa, (See Fig. IV).

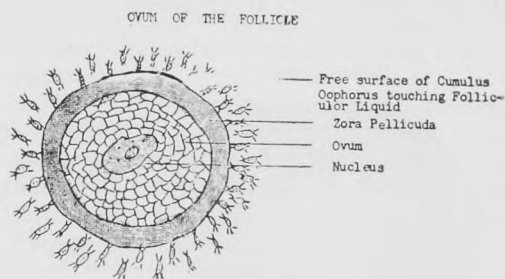


Figure 4

In the mature follicle the connective tissue capsule reaches its highest development. Its theca externa consists of concentrically arranged fibres and fusiform cells and contains large blood vessels. The theca interna is composed of large polyhedral cells with oval nuclei and fine lipid drops in their cytoplasm. Between the large cells of the theca interna is a network of thin fibrils continuous with those of the theca externa and the rest of the ovarian stroma. There are many capillaries in the theca interna close to the basement membrane.

Corpus Luteum

After the rupture of the follicle and the discharge of the liquor and the ovum with its corona radiata, the wall of the follicle collapses and the epithelial membrana granulosa is thrown into folds and appears considerably thickened. The cavity of the empty follicle has an irregular stellate shape. The theca externa keeps its regular

ovoid outline while the theca interna on the contrary, loses them. At the base of the folds of the granulosa, the cells of the theca interna accumulate in triangular masses, while between the folds they are very scarce or absent.

The principal role in the formation of the corpus luteum is played by the epithelial follicular cells. They begin at once to hypertrophy and in a few days attain a considerable size. The cell body becomes polyhedral; the nucleus also swells and assumes a spherical form with a coarse chromatin network and one or two nucleoli. Such hypertrophied follicle cells are called granulosa lutein cells. Simultaneously the spindle-shaped cells of the theca interna and with them a multitude of capillary sprouts, penetrate radially into the thick layer of follicular cells. When these connective tissue elements reach the inner surface of the folded granulosa layer, they rapidly form a very loose, gelatinous connective tissue, which covers the inner surface of the wall and leaves a space free in the centre. The large, lipid containing epithelioid cells of the theca interna remain scattered at the periphery of the folded layer of lutein cells and accumulate in the angle of the folds. They have been given the name of theca lutein cells while the true lutein cells of epithelial origin are designated as granulosa lutein cells. (See Fig. V).

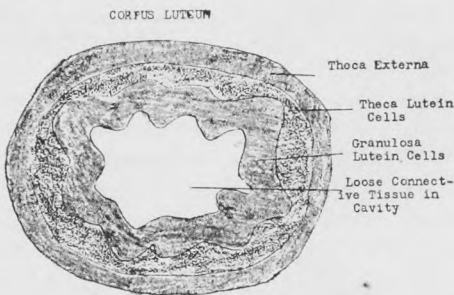


Figure 5

The granulosa lutein cells have a clear, slightly vacuolated cytoplasm, contain a distinct cytocentrum in the vicinity of the nucleus, mitochondria, and a Golgi net. The theca lutein cells are smaller and more highly vacuolated in ordinary sections.

If the discharged ovum be not fertilized the corpus luteum quickly degenerates and within 2 months, is reduced to a small cicatrix. If the ovum be fertilized the corpus luteum increases, reaching its maximum size at five months and then begins involuting. Involution proceeds rapidly after delivery.

Atretic Follicles

Atresia may begin at any stage of development of the follicle, consequently many follicles in various stages of development may be seen undergoing atresia. The histology of an atretic follicle is a subject all of itself.

Stroma

The interstitial connective tissue or stroma of the cortex consists of networks of reticular fiber and spindle shaped cells which resemble smooth muscle cells, but do not have fibrils in their cytoplasm. These cells are probably not common fibroblasts for they may give rise to interstitial cells and, in ovarian pregnancy, to decidual cells. Elastic fibres occur in the cortex only in the walls of the blood vessels. Beneath the "germinal" epithelium the interstitial connective tissue is condensed into the tunica albuginea. The peculiar layer of stroma surrounding the follicles, the theca folliculi, has been described above.

The medulla is made of loose connective tissue with many elastic fibres and, accompanying the blood vessels, strands of smooth muscle cells.

Interstitial cells, of debatable endocrine function are either absent or present in small numbers as irregular cords of large polyhedral "epithelioid" cells scattered in the stroma.

Blood Supply

Arteries: The ovary receives its blood supply from the ovarian artery primarily and because of anastomosis of the ovarian and uterine arteries may receive a small supply from the latter.

Both the right and left ovarian arteries arise from the abdominal aorta, pass downwards and laterally on the psoas major muscle, cross in front of the ureter and then cross the external iliac vessels $\frac{1}{2}$ inch in front of the ureter. At the attached lateral portion of the broad ligament it enters the suspensory ligament of the ovary. The ovarian branches now reach the hilum of the ovary by way of the mesovarium while the terminal branches continue medially in the broad ligament to supply the uterine tube, the upper part of the uterus and then anastomoses with branches of the uterine artery in the broad ligament. In the terminal portion of its course the artery is tortuous and is surrounded by the pampiniform plexus of veins which form the ovarian vein. (See Fig. VI).

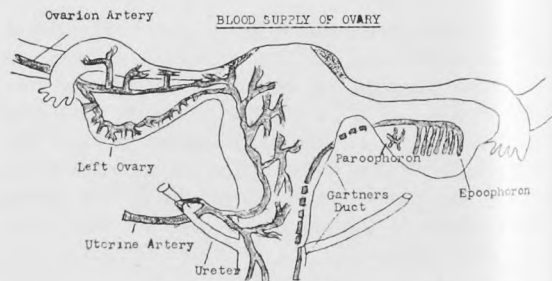


Figure 6

On entering the hilum of the ovary the vessels branching profusely, run through the medulla where they form a plexus in the periphery of the medulla from which smaller twigs penetrate radially, between the follicles, into the cortex and

break up into capillaries which form dense networks in the theca of the large follicles (See Fig. VI).

Veins: The veins accompany the arteries; in the medulla they are very large and tortuous and form a plexus in the hilus. The veins emerge from the hilum in the form of a plexus, the pampiniform plexus; the ovarian vein is formed from this plexus and leaves the pelvis in company with the artery. The right ovarian vein ends in the inferior vena cava while the left ovarian vein joins the left renal vein.

Lymphatic Drainage

Networks of lymph capillaries arise in the cortex, especially in the theca externa of the larger follicles. Lymph vessels with valves are found only outside the hilus. On emerging from the hilus, the lymphatic vessels draining the ovary join the rest of the upper group of pelvic lymphatics which are also draining the body of the uterus and the oviduct. These lymphatics accompany the ovarian vessels in the suspensory (infundibulopelvic) ligament and terminate in the lateral and pre-aortic groups of lumbar lymph glands.

Development

During the fifth and sixth weeks (5-12 mm) the genital system makes its appearance. This has been named the "indifferent period" because the sex of the embryo cannot be determined then, either by gross or microscopic inspection of the internal and external genitalia. Not until the seventh week, at the earliest, does sex recognition become practicable by simple inspection.

The primitive sex gland makes its appearance within a thickening on the dorsal mesentery known as the urogenital ridge.

On the ventromedian surface of the urogenital ridge the peritoneal epithelium thickness (6 mms embryos) rapidly becomes many-layered and soon bulges into the coelom, to produce the genital ridge. This thickened strip extends longitudinally and thus parallels the mesonephric ridge, but lies mesial to it. At 6 weeks the resulting, "sexless" gonad consists of a superficial germinal epithelium and internal epithelial mass somewhat loosely arranged, derived from the former. Longitudinal furrows separate the indifferent sex gland from the mesonephros laterally and from the gut mesentery medially. During the next two weeks the gonad begins to assume the characteristics of the ovary.

Even in presomite embryos, large distinctive cells can be recognized caudal to the embryonic disc in the yolk sac entoderm. Soon afterwards they lie in the cloacal entoderm and in 4 mm embryos they are migrating cephalad by way of the entodermal gut and dorsal mesentery into the epithelium of the genital ridge. Such cells are called primordial germ cells. Some claim that all

definitive germ cells of the genital glands are descended from them, but it is more probable that these cells are not the ones actually used, but that the definitive sex cells originate locally from the germinal epithelium.

The ovary now gains a mesentery, the mesovarium, and settles to a more caudal position. Yet this gland does not exhibit any distinctive ovarian features until several weeks after the testis has declared itself in the male. However, gonads that do not differentiate epithelial chords during the seventh week can be diagnosed negatively as ovaries. In the eighth week the internal epithelial mass of the indifferent period begins to show clusters composed of small indifferent cells and one or more primordial germ cells. Soon there may be distinguished a denser primary cortex beneath the germinal epithelium and a looser primary medulla internally. In addition, a compact cellular mass bulges from the medulla into the mesovarium and establishes there the primitive rete ovarii or homologue of the rete testis. Neither epithelial cords nor tunica albuginea are developed at this stage as in the testis.

In fetuses three to four months old, three important changes are taking place:

1. Most of the cells comprising the original internal cell mass transform into young ova, the conversion spreading from the region of the rete peripherad.

2. The ovary enlarges rapidly, due to the deposition of a new, definitive cortex upon the original internal cell mass. This secondary cortex arises partly by the division of cells of the internal cell mass already present, and perhaps also through a renewal of proliferation by the germinal epithelium. In the human ovary this new stratum is said to be a homogenous mass; distinct, cellular cords ("Pfluger's tubes") do not grow in from the germinal epithelium as in other mammals.

3. Ingrowth of connective tissue (accompanied by blood vessels) from the region of the rete ovarii produces supporting structures. At the periphery of the ovary the supporting structures expand during the sixth month into a loose connective tissue layer, the tunica albuginea; its appearance marks the end of the period of deposition of the new cortex.

Coincidental with the addition of new cells (secondary cortex) at the periphery goes the decline of the earlier ova which were growing in the primary medulla and cortex. Such clusters of germ cells, separated by invading connective tissue, regress and are replaced by a vascular, fibrous stroma; thus arises the premanent medulla.

In the secondary cortex single eggs and egg clusters are similarly isolated by connective tissue, but they do not succumb. Instead indifferent epithelial cells surround the young cortical ova in the latter fetal months and thereby produce the

primary follicles. Although some of these advance further during foetal life and after birth the development of Graafian follicles is mostly characteristic of the active sexual years.

Mention might be made that the rete ovarii is vestigial, though retained in the adult. Some time before birth it canalizes, often uniting with the cranial group of mesonephric tubules, which always remain a functionless rudiment. Most of these components are blind canals attached to a short persistent segment of the mesonephric duct. The whole complex is the epoophoron. (See Fig. VI).

The original positions of the ovary changes during development. At first it is a slender structure extending caudad from the diaphragm. A faster elongation of the trunk cephalad, in contrast to the slower growing gonad, produces a relative shift of the latter in a caudal direction until the sex gland lies ten segments below its level of origin. When this process of growth and shifting is complete (10 weeks) the caudal end of the gonad lies at the boundary between abdomen and pelvis.

How comes the ovary to enter the pelvis? Just as in the male the gubernaculum testis passes through the inguinal canal into the scrotum fol-

lowed by the processus vaginalis and the testis, so in the female the gubernaculum ovarii passes through the inguinal canal into the Scrotum, followed by a processus vaginalis peritonei (the canal of Nuck). But the gubernaculum ovarii acquires a side attachment to the uterus. As a result the ovary passes into the pelvis drawing its vessels and nerves across the external iliac vessels after it. The inter-position of the uterus between the ovarian and round ligaments serves as a normal block to ovarian descent and in this way is partly responsible for the retention of the ovaries in the upper pelvis.

After birth the ovary gradually attains its pelvic position. Each ovary rotates into a transverse position and also revolves about the uterine tube until it comes to rest dorsal to the tube.

References

- Synopsis of Regional Anatomy—Johnston.
- Surgical Anatomy—Gallander.
- Developmental Anatomy—Arey.
- Textbook of Histology—Maximow and Bloom.
- Method of Anatomy—Grant.
- Gray's Anatomy, Descriptive and Applied.
- Obstetrics and Gynecology—Adair.

Observations on the Care of the Premature Infant

Harry Medovy, B.A., M.D.*

During 1951 over 7,000 babies were born to residents of Greater Winnipeg. Over 3,000 were delivered at the Maternity Centre of the Winnipeg General Hospital, and 200 of these infants were born weighing less than 5½ pounds. They are classed as premature infants and although some of these babies are vigorous and robust and tend to do just as well as full term babies weighing 6 or 7 pounds at birth, many of them are frail, immature and require the use of specialized medical and nursing techniques to ensure their survival.

The care of the premature infant has undergone tremendous changes in the last decade. In our own hospital before the construction of the Maternity Centre, newborn facilities were extremely inadequate. Space was at a premium and all the infants were crowded into 2 or 3 small rooms. If the facilities for full term newborns were unsatisfactory they could only be considered primitive where the premature infant was concerned. There were no incubators, no separate space or nursing facilities; oxygen when it was used was administered by rubber tubes placed in the nose or throat and there was no unified over-

all supervision of these tiny infants. It is a remarkable tribute to the doctors and nurses of that day that the mortality rate was not much higher than it was.

The present physical set-up or the Maternity Centre has overcome many of these difficulties. The prematures are kept in a specially constructed room, away from the general ward medical and nursing traffic, efficient incubators are available in reasonable numbers for their care, and oxygen outlets are available for every incubator. More important a specially trained nurse is in charge of the prematures and is relieved of all other duties. All the prematures come under the supervision of the New Born Service and the overall plan for their care is incorporated into standing orders which are revised from time to time to keep up with established modern newborn care and are based largely on the recommendations of the Committee on New Born Care of the American Academy of Paediatrics.

What are the main details of the care of these tiny infants?

Immediate natal and post-natal care—analgesics and anaesthetic are individually ordered for the mother of an infant of less than 36 weeks gestation. The Department of Obstetrics does not permit the administration of an analgesic or anaesthetic to such a case except when specifically ordered by the attending doctor. This reduces considerably the risk of anoxic injury and increases the chance of survival of the premature infant. Immediately after delivery the infant is

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posturized head down and gentle suction used to clear the airway of any obstructing fluids and secretions. The infant is kept wrapped in a warm towel during this procedure. It is then placed in a pre-warmed incubator (90°F.) and taken at once to the premature nursery.

Incubator Care

The modern incubator is simply a device which permits us to look after an infant under conditions of controlled heat, moisture and oxygen. It has the added advantage, often overlooked, of providing very satisfactory isolation so that in small hospitals, individual incubators may take the place of expensive premature units.

The temperature of the premature infant is often at a lower level than the generally accepted normal. A rectal temperature of 95° F. or 96° F. should not be raised by artificial means to 98° or 99° F. To do so would be tantamount to taking a full term baby with a rectal temperature of 98° F. and raising it by adding external heat, to 101° F. or 102° F. The relatively low temperature of the premature infant means a reduced requirement for oxygen and calories and is therefore a distinct advantage in its management. Under ordinary conditions a temperature of 98° F. is reached by the end of the first week. Excessive fluctuation of temperature is of course to be avoided. Generally speaking the incubator temperature should be left at 90° F. for the first few days, then lowered gradually so that it is at 80° F. for a few days before the infant is ready to leave the incubator. The moisture requirements are higher the higher the incubator temperature, and these figures are readily checked in the modern incubator and should be maintained by careful and frequent observation.

The infant requires no clothing while under incubator care, and heat is better absorbed if the baby is kept nude. There is an obvious advantage also in that respiratory movements are not hampered by clothing and the baby's respirations and colour are clearly visible at all times.

Oxygen should be supplied to all premature infants for at least the first few hours. It may then be discontinued for the larger prematures but those in the 1000-1500 gms. group may require it for 2 or more days. A flow rate of 3 litres per minute should provide a concentration of 50% oxygen in the incubator and need rarely be exceeded. In general the tendency has been to use oxygen in too high a concentration and for excessively long periods.

During the first 24 hours the infant should be left **severely alone** under the above environmental conditions. Nothing should be given per ora. In infants under 3 lbs. the "nothing per ora" period may be extended to 48 or even 96 hours with advantage. The infant is thus given an opportunity to adjust to its extra-uterine environment,

to get over the period of "birth shock," to establish its respirations and circulation at a satisfactory level and is then ready for feeding.

Feeding of the Premature Infant

Premature infants weighing less than 4 lbs. are often unable to suck and those weighing less than 3 lbs. have in addition a poorly developed swallowing mechanism. For this reason it has been our custom to start feeding all prematures under 4 lbs. at birth by gavage. When this is done by trained personnel, at not oftener than 3-hour intervals and the dangers of aspiration accident stressed at every opportunity, it is a very safe, quick and satisfactory method of feeding. As soon as the infant shows evidence of being able to suck, the Brecht feeder is substituted and in a few days the regular feeding bottle is used. The rubber-tipped dropper is not used. We believe it to be dangerous and time consuming.

More recently the Polyethylene tube, a plastic tube .062 inches in diam., has been used in the Premature Nursery with real success in those infants, especially in the 2-lb. group who tend to become cyanosed and to have severe respiratory distress during gavage feeding and in those infants with atelectasis or pneumonia or intracranial damage who stand feeding very badly. Feeding by means of the Polyethylene tube is safe from aspiration accidents and is much to be preferred over intravenous and "clysis therapy." The tube, about 9 inches long, has sharp edges which should be filed with an emery paper before using. It may then be introduced through the nostril into the stomach. The free end is strapped to the side of the baby's face and the open end plugged with a sterile toothpick. The feeding is introduced with a syringe using a 23 gauge needle.

The Polyethylene tube method of feeding has the additional advantage that once the tube is inserted, it may be left for 3-7 days without changing and feedings may be given by even junior nurses. It should thus prove to be useful in small hospitals which do not have specially trained nurses for premature care.

Breast milk is still without doubt the most satisfactory food for the full term infant and in most cases the premature of 4½ lbs. and over can be breast fed. In smaller prematures, at the Maternity Centre, breast feeding has proved to be impractical.

Various types of artificial milks have been used with success in the feeding of premature infants. In spite of the claims of various clinicians for their own pet method of feeding, one has the feeling that the type of milk used is not too important and the good results obtained are due to an appreciation of the importance of not starting feeding too soon, of using great caution especially in the first few days of feeding, of not offering more food in quantity than the infant can tolerate

without regurgitation, of not being overanxious as far as weight gain is concerned and of not changing the formula frequently because of minor stool changes or slow weight gain. In our own experience, using a fairly conservative, simple feeding routine, digestive disturbances have been rarely encountered. There seems little doubt that infection and not the type of feeding used was responsible for the poor results in premature infant feeding in the past.

We have favoured the use of partly skimmed milks in the premature nursery ever since the work of Powers at Yale and Levine and Gordon at Cornell satisfied us that this type of milk was suitable for premature feeding and possessed some advantage which other types of feeding seemed to lack. Once again it should be stressed that whole cream, evaporated milk mixtures and powdered whole milk (S.M.A. and Lactogen) have been used successfully in premature feeding and our own preference of 2% milk should not be construed as condemnation of these foods in the feeding of premature infants. It should also be noted that breast milk has been used with great success on the continent and in some of the larger United States cities.

The following is an extract from the Standing Orders of the Premature Ward at the Maternity Centre and may be used as a guide for feeding infants in this weight group.

Formulae for Prematures

	F.W. 1	F.W. 2	F.W. 3
(1) Farmer's Wife Milk No. 2	5 oz.	7 oz.	8 oz.
Boiled Water	15 oz.	14 oz.	12 oz.
Dextrimaltose No. 1	2 tbsp.	3 tbsp.	4 tbsp.
Calories per oz.	10.5	14	18

Change from (1) to (2) may be made after 3 days of satisfactory feeding. Change to (3) is to be made on orders of the attending physician or resident.

(2) Dryco Formula
Dryco, 5 tbsp.
Water, 10 oz.
Calories per oz., 15.

Feeding Amounts

The following schedule is intended as a guide for a 2½-lb. premature (1500). Feeding for smaller prematures should be started at 3 c.c.'s and be increased by 2-3 c.c.'s every other feeding to the infant's tolerance, which may be about 10-12 c.c.'s. Babies under 1500 gms. (2½ lbs.) require much smaller feedings in proportion to their weight than babies over 1500 gms.

Age	5% Glucose c.c. per feeding	Feeding Mixture c.c. per feeding	Total Fluid c.c./Kg 24 hrs.	Total Cal. c.c./Kg 24 hrs.
1 day	0 plus	0	0	0
2 day	8	0		
3 day	8	4		
4 day	8	8		
5 day	8	12		
6 day	8	16		
7 day	5	20-25		
8 day	0	30		

Thus, a 2½-lb. baby receives 1 oz. of feeding o.h. 3 x 8 on the 8th day. On the 6th day the No. 2 F.W. feeding may be used. In larger prematures the amount of feeding offered can be increased to

tolerance.

(f) Vitamin K—½ c.c. Kavitan to be given twice daily for 4 doses to all prematures.

(g) Vitamin C—50 mg. to be given to all prematures by mouth after the 5th day.

(h) 5 drops daily of A, B, D, E, C or Supplavite or Trivisol to be given daily after 1st week.

Control of Infection

The importance of keeping cross infection to a minimum in premature wards is fully appreciated by every practitioner and should require no emphasis here. In brief the measures which contribute to the reduction of infections are as follows:

(1) Provision of separately located and staffed premature nurseries. These should be equipped with a separate set of diagnostic instruments.

(2) Exclusion of all personnel, medical, nursing and maid service, not absolutely essential to the operation of the ward.

(3) Absolute insistence on hand washing and gown technique before each premature is handled.

(4) Exclusion of doctor, nurse or maid who has a respiratory or gastrointestinal or skin infection. To be successful this must in the last analysis depend on the awareness of the individual concerned of his or her own responsibility in not knowingly entering the ward if he harbours or thinks he harbours such an infection.

Experience in Chicago and other large centres has shown that if these regulations are to be effective they must be obeyed, and that medical and nursing personnel charged with enforcing these regulations should themselves be checked up to see that the standards are maintained. Just as fires often result from laxity in enforcing existing regulations, so devastating infections in premature wards have their origin in failure to insist on adherence to prescribed rules of technique.

The results of one year's care of 200 premature infants in the Maternity Centre of the Winnipeg General Hospital is contained in the following table. The comparative figures are those of Dr. Katharine Bain and represent a sampling in 1950 of more than 200 Maternity Hospitals in the United States.

Premature Statistics, Winnipeg General Hospital

Weight Group (2.3 lbs. & less)	May, 1950 — May, 1951		Fatality Rate	
	No. Live Born	Deaths	Rate	Bain (200 Hospitals)
Under 1000 gms.	4	2	50%	89.6%
1001-1500 gms.	23	11	47.8%	54.5%
1501-2000 gms.	41	7	17.1%	22.8%
2001-2500 gms.	132	4	3.1%	7.3%
Total	191	27	14.1%	21.5%

The analysis of the 27 neonatal deaths noted above as well as some observations on reduction of the neonatal death rate will form the subject of another paper which will appear in these columns later this year.

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The Challenge of Sir Frederick Banting

Medical Research in Canada with Special Reference to Cancer

P. H. T. Thorlakson, M.D.

The discovery of insulin for the control of diabetes by the late Sir Frederick Banting in 1921 has been hailed as the beginning of an active programme of medical research in Canada. In addition to his own special contribution and discovery, he encouraged and influenced medical research in all parts of Canada.

Young scientists were attracted to him and applied for permission to work in his laboratory. Wherever he travelled, young men and women were eager to hear him speak and were encouraged when he told them about the opportunities that were being created in order that they might pursue a particular research problem. It is not generally known that during the last 15 years of his life he conducted research in cancer.

In 1936, President McNaughton of the National Research Council submitted proposals concerning the organization of medical research in Canada to the Canadian Medical Association, the Royal College of Physicians and Surgeons of Canada and the Departments of Pensions and National Health. As a result of these discussions, the National Research Council in Ottawa created the Associate Committee on Medical Research in 1938, with Sir Frederick Banting as Chairman. Beginning in October of that year, he set out to make a survey of research facilities in Canadian medical schools. In his travels he found many medical scientists eager to carry out research. In his speeches that year, he urged Canadians generally and the Universities in particular to do whatever lay in their power to stop the annual loss of many of our young trained scientists. These young men and women were leaving Canada because of the lack of research facilities and financial support. How far has Canada progressed in the last 14 years in meeting the challenge presented in 1938 by Sir Frederick Banting?

The Associate Committee in 1938 was given in its first year a budget of \$53,000.00. Medical scientists in the Universities were invited to make application for research assistance. More requests came than could be satisfied and preference was given to investigations bearing on chronic diseases.

The programme of medical research had hardly begun when suddenly we were at war. Canada's medical research efforts had to be turned to the solution of problems associated with aviation, naval and army medical research. The problems investigated related to the comfort, safety, protection, clothing, and nutrition of the particular service for which special committees were established. During a five-year period much was accomplished in the practical application of fundamental knowledge previously learned. Subjects receiving special

attention were the prevention and treatment of shock, storage of blood, the preparation and storage of blood derivatives, treatment of infection of wounds, and the treatment of burns and injuries. Much was also accomplished in problems of special interest to aviation medicine, especially those related to the physiological reactions of pilots at high altitudes and sudden changes in gravitational forces. In the Navy, Canada had a specific contribution to make in the treatment of what is called "immersion foot." Important contributions were made on the subject of motion sickness by Dr. Best and his associates. In matters related to army problems, the work done at Suffield in Alberta was outstanding for the contributions made to the allied cause in the subject of gas warfare.

And what of the post-war period? Very briefly, it might be stated that there has taken place, since the end of the war, a vast acceleration of medical research across our country. Due largely to public interest in the problem of cancer created by the active Divisions of the Canadian Cancer Society, definite steps were taken to ensure a more concerted effort in the field of medical research related to cancer. In January, 1947, the Honourable Mr. Paul Martin, Minister of National Health and Welfare, called a conference of representatives of all those organizations which might be interested in cancer research and treatment. Out of this came the organization of the National Cancer Institute, which undertook to co-ordinate cancer research in Canada and to support graduate training in cancer research and treatment.

The National Cancer Institute required funds. The trustees of the King George V Jubilee Cancer Fund offered its capital sum of \$450,000.00 to the National Cancer Institute in three annual instalments as a nucleus for its programme. Additional funds were subscribed by the Canadian Cancer Society. The new organization was then in a position to invite applications for assisted research grants and fellowships on the problem of cancer. The Institute decided that any investigation involving problems of growth and metabolism would be acceptable in its research programme. This opened the field to botanists, zoologists and biochemists, as well as to experimental pathologists, physiologists, physicists, cytologists, and virologists. In 1947 the Institute made 28 awards, amounting to \$84,000.00. In 1949 it made 57 awards and appointed 6 research fellows. As soon as the National Cancer Institute was able to give grants for cancer research, the National Research Council withdrew from the field. The most remarkable feature of this change, however, was that whereas the National Research Council had received very few applications for research in cancer and made only two awards in 1946, the National Cancer Institute within a year of its establishment received 48 applications amounting to \$360,000.00. This was due partly to the

liberal interpretation of what constitutes research in cancer, partly due to the interest awakened by the great publicity attending the new organization, and partly due to the expansion in research facilities in the Universities. The National Cancer Institute has now been in existence for almost five years and during that period has assisted cancer research in our Canadian medical schools and hospitals to the extent of over \$1,000,000.00. Over 70 research projects are currently being supported in our medical schools, and up to as many as 15 men per year are assisted in their research training. That the public has whole-heartedly supported the efforts of the National Cancer Institute is made evident by the fact that the Canadian Cancer Society, through its Provincial Chapters, has contributed over one-half of the funds available for its work. The remainder of the funds have come from federal and provincial grants for the control of cancer.

But interest in our various health problems has not been confined to the subject of cancer alone. The Canadian Arthritis and Rheumatism Society is now active in the diagnostic and treatment field and also in the support of research relating to the peculiar problems of arthritis and rheumatism. The federal health grants announced in 1948 have made available several hundred thousand dollars per year for public health research. The Defense Research Board is supporting investigation on problems of particular interest to its work. Other amounts are available for mental health research and public-spirited groups, such as the Canadian Life Insurance Officers' Association and several pharmaceutical companies, have contributed munificently to the support of medical research in Canada. That Canadian scientists are capable of making an important contribution in medical research is also shown by the fact that American fund-granting bodies give approximately \$200,000.00 per year towards the support of medical research in Canada. In 1947 and 1948 Canadian Universities were receiving, for medical research purposes, more than \$1,250,000.00 per year. *At the present time, the figure is \$2,355,000.00 and the total number of Canadians actively engaged in medical research in Canada now probably exceeds 1,200.* I am sure that Sir Frederick Banting would have been pleased with this evidence of progress. The fact that young Canadians are able to carry out research to this extent in our Canadian Universities is, in part, a tribute to his leadership.

Having reviewed briefly the story of the growth of medical research in Canada, or, what we might better call our coming of age in the field of medical research, I would like to turn for a few minutes to the story of cancer.

One of the greatest figures in the history of medicine, Galen, developed a remarkable clinical classification of tumors about 150 A.D. This classi-

fication has stood well the test of time and requires no alteration to bring it within the scope of what we know today. He spoke of "tumors according to nature," which would include the enlargement of the breasts during pregnancy and lactation and the increase in the size of the uterus during pregnancy. He referred also to "tumors exceeding nature," an example of which was the callous formation seen in the healing of broken bones. Then again, he referred to the "tumors contrary to nature" and within this group he placed the benign and malignant tumors which we know today.

The microscope was invented by a Dutchman in the 17th century A.D., but almost two centuries were to pass before it was recognized that the cell was the fundamental unit of all living matter. It was then just one short step before it was shown that cancer tissue is but an aggregate of individual cells. Some clarification of the nature of cancer thus became possible and the idea that cancer represented an abnormal proliferation of cells seemed to evolve naturally. Side by side with the careful classification of tumors under the microscope, clinicians were also carefully recording the clinical nature of cancer. That is to say, how it behaved in humans and the various forms in which cancer manifests itself.

In 1911, Dr. Peyton Rous, working at the Rockefeller Institute in New York, visited a market place and offered \$5.00 for every live bird brought to his laboratory with a tumor. Many birds had abscesses and other swellings but eventually a Plymouth Rock hen was brought in with an unusual tumor. It was a sarcoma known since as Rous' Sarcoma. He was able to transplant this tumor into other birds. Furthermore, the fluid from the tumor could be passed through a Berkeley filter and when the solution was injected into the tissue of a bird, the same type of tumor developed. This observation created quite a furore in scientific circles. Was cancer in the human caused by a certain virus infection? The evidence is against such a theory. However, this particular tumor has been investigated in research laboratories in many parts of the world. All of them, however, trace their original source to the same tumor found in this one Plymouth Rock hen in New York City in 1911. No other example of a similar spontaneous tumor in fowl has been discovered. However, the investigation of this particular tumor has contributed to our knowledge of the behaviour of malignant tumors.

In 1915 two Japanese produced cancer on the ear of the rabbit by painting it for long periods with tar. One of the finest stories in medical research was to take place over the next fifteen years. It is the story of Kennaway and his colleagues in London who persevered for fifteen years in attempting to isolate from tar the agent responsible for producing cancer. They were suc-

cessful. Since then some 300 cancer-producing chemical compounds have been described and our experimentalists today are able to produce cancer at will and study the nature of the changes which take place.

Prior to 1947, at which time the National Cancer Institute of Canada was created, only a small handful of Canadian medical scientists were working on problems related to cancer. As I have already mentioned before, there has been, over the past four or five years, a great acceleration of activity in this field. At the present time, some 75 projects in thirteen Canadian medical schools and larger hospitals are receiving financial support for work related to the problem of growth. This work is supported in equal parts by federal-provincial funds and by voluntary contributions to the provincial divisions of the Canadian Cancer Society.

Progress in medical research related to cancer cannot be measured in terms of what is accomplished from year to year, but in terms of what is accomplished in ten and twenty-year periods. Our research workers are making their individual contributions to the total sum of knowledge concerning the nature of cancer and it can be said, in all fairness, that Canada is now making its proportionate contribution to the international effort devoted to finding the cause and the cure of this disease.

A few examples of work now being supported in Canada will serve to illustrate this fact. In British Columbia, a botanist is devoting his time to a study of tumors which occur in plants where the phenomena of cell division can be more easily observed and interpreted than is possible in the complex animal organism. In Edmonton, the anaemia characteristic of some form of cancer is being studied in tissue culture and an anatomist is extending an observation, made by him several years ago, that there is a great concentration of iron in the breast tissue of mice which have a tendency to develop cancer in this organ. In Saskatoon, a young and most capable physicist, working in collaboration with his medical colleagues, has made possible the treatment of patients with the high energy x-rays produced by the betatron and the tremendous energy in the form of gamma rays produced with radioactive cobalt. We may take some pride in the fact that this is the only country in the world at the present time in which this latter form of treatment is being used.

In Winnipeg and several other centres, doctors are studying the effects of radioactive iodine in the treatment of cancer of the thyroid gland. At the University of Western Ontario in London, benign

and malignant tumors of the breast (in rats) are being intensively studied by the Department of Medical Research under Dr. J. B. Collip, who played so significant a role in the development and purification of insulin. In Toronto, animal tumors are being grown in the yolk sac of fertilized eggs and their reaction to a variety of growth inhibitors is being observed. A biologist, using the technique of tissue culture, is endeavouring to establish exactly which chemical substances are necessary for the growth and division of normal and cancer cells.

At McGill University, the man who was responsible for the discovery of 2,4-D, the new well-known weed killer, is devoting his efforts to a study of the differences in biochemical behaviour of normal and cancerous cells.

Many more examples might be quoted but these few will serve to demonstrate that an active and earnest effort in cancer research is being made in Canada at the present time. This effort will continue and expand and there is no doubt in my mind that the young men and women who are being supported in their research training by the National Cancer Institute of Canada will have many and useful contributions to make in the years to come.

Sir Heneage Ogilvie, one of Britain's leading surgeons, summarized the situation with regard to cancer research in an address delivered at the last annual meeting of the British Empire Cancer Campaign: "The progress of the Cancer Campaign can be compared with the progress of a ship across the ocean. Each day those on board wake up to look over an unbroken expanse of sea,—bright and calm one day, dull and stormy the next. They have no visible evidence of progress towards their destination, but only of movement through the restless waves which billow in all directions as far as the eye can see. Those responsible for the ship's navigation have, perhaps, a greater conscious appreciation of the advance, although even to them it appears as no more than a change in the position of a pencilled dot on a chart. But in the fullness of time land appears over the horizon; the harbour is reached; and those on board are brought to a conscious realization that they have come some great distance across the world. So it is with the Cancer Campaign. Day by day the work goes patiently on,—sometimes easy and satisfying, more often difficult and perplexing. The distant harbour still lies somewhere below the horizon, and it is at times difficult to appreciate that the ever-increasing store of knowledge being produced is, like the unseen propeller of the ship, steadily but surely driving the Campaign onward to that harbour."

Korea Veterans — Malaria

T. H. Williams, M.D.

More than a score of cases of Malaria have been seen recently at Deer Lodge Hospital in troops returned after service in Korea. These are usually first attacks, with no history of malaria while on service abroad. Malarial suppressive drugs taken on active service are suppressive and not preventive. So long as the drug is regularly taken no symptoms occur but the parasite is not eradicated, merely suppressed. After ceasing the suppressive drug, whichever one is being used, the parasite increases in the viscera until breakthrough to the blood takes place and symptoms

begin. Malaria at first has a **daily** high temperature, with **periodic** chill and temperature developing later, and repeated every 48 hours in the common Tertian variety or 72 hours in the Quartan.

Positive diagnosis is made by stained blood smears by experienced microscopists, and the parasites are very difficult to find if antimalarial drugs have been already taken. A few malarial chills do not constitute an emergency and in fact, act as a foreign protein injection to stimulate antibodies. The patient should not be treated for malaria until a positive blood film is reported. It is not true that the blood smear must be taken at the time of a chill.

Anaesthesiology

Abstract

Treatment of Peripheral Embolism by Continuous Sciatic Nerve Block. L. N. Cheeley. Current Research in Anaesthesia and Analgesia. 31, May-June, 1952, 211.

The author reports a case of occlusion of the femoral artery in a patient who presented himself too late for embolectomy and was too poor a risk for lumbar sympathectomy. Sympathetic ganglion block was performed with fleeting relief. It was felt that repeated blocks were required and as these were painful and disturbing to the patient some other method was indicated. Simple sciatic block was performed with relief of pain and warming of the extremity. A four-inch 13 gauge needle was inserted as far as the sciatic nerve, and a number 4 ureteral catheter was threaded through and left in contact with the sciatic nerve, and hourly injections of metycaine were made. This therapy was continued for three weeks with gradual improvement of the condition of the leg. The patient was ambulatory and was taught to administer the metycaine himself.

Conclusion

"Continuous sciatic block is relatively simple to perform. It produces satisfactory pain relief and warmth of the extremity. There is no danger of accidental spinal anaesthesia (this danger exists with caudal anaesthesia). The possibility of intra-arterial or intravenous injection is slight (this danger exists with para-vertebral sympathetic ganglion block). Bladder and rectal function is not disturbed. In contrast to medical therapy, it produces desirable, localized rather than generalized vasodilatation."

The Use of Sciatic Nerve Block for Producing Vaso-Dilatation of the Lower Extremity and Com-

parative Study With Paravertebral Lumbar Sympathetic Ganglion Block. Anaesthesiology, 13, March, 1952, 207. Milton J. Marmer, M.D.

Vaso-dilatation of the lower extremities may be produced by interruption of the sympathetic pathways. The author has reviewed the literature rather thoroughly and finds little mention of the use of the sciatic nerve for block of the sympathetic nerve supply to the lower limbs.

L. W. Potts has shown that the arteries to the extremities receive their nerve supply mainly from the peripheral spinal nerves. The sympathetic fibres run to the extremity by means of the somatic nerves.

The sympathetic nerves to the extremity act as vaso-constrictors and interruption of these fibres will cause a vaso-dilatation. Commonly, the sympathetic pathways to the arteries of the leg are blocked by procaine or alcohol infiltration of the lumbar sympathetic ganglion. The author of this article feels that blocking the sciatic nerve will produce the same result as paravertebral ganglion block.

In a series of 42 sciatic nerve blocks and 11 para-vertebral ganglion blocks he shows fairly conclusively that the results, as measured by temperature rise in the extremity (checking temperatures at the heel, toe and ankle), are always as good and often much better after sciatic nerve block than after para-vertebral sympathetic ganglion block.

This information, coupled with the fact that sciatic nerve block is easier to perform than para-vertebral ganglion block, and is unattended by complications, makes it a method of choice when seeking to determine the degree of vasoconstrictor tone and the extent of vaso-dilatation which can be produced by interruption of the sympathetic pathways.

The Development of Efocaine. A new approach to prolonged local anaesthesia, by F. P. Ansbro, M.D., A. A. Iason, M.D., H. E. Shaftel, M.D., A. Halpern, Ph.D., F. S. Latteri, M.D., and B. Bodel, M.D., *Anaesthesiology*, 13: May, 1952, 306.

"The experimental background leading to the development of an aqueous miscible prolonged local anaesthetic is presented. . . .

"The injection of a suspension has a number of drawbacks. . . . These drawbacks were circumvented by forming a saturated solution of an aqueous-insoluble anaesthetic base in a water-miscible, non-toxic organic solvent which, when diluted with minimal quantities of body fluids, would cause a complete and immediate deposition of the active ingredients to form an in-vivo drug repository, thus exerting a prolonged effect. . . .

"Propylene glycol was selected as the organic solvent because of its water miscibility and its nontoxicity. . . . Efocaine consists of a procaine base 1%, procaine hydrochloride 0.25%, butyl-p-aminobenzoate 5%, propylene glycol 78%, sodium metabisulphite 0.1%, phenyl mercuric borate (1:25,000) and water 20%.

"The histopathologic effects of efocaine on skin, subcutaneous, submucosal, intramuscular and nerve tissue were studied in both acute and chronic experiments. Eleven rabbits, twelve

guinea pigs and twelve rats were used. It was evident from the observations that efocaine does not provoke a foreign body reaction and does not remain in a demonstrable form in the tissues. . . .

"Efocaine was evaluated clinically as a means of controlling post-operative pain. Seventy-nine patients, consisting of 54 major and 25 minor surgical cases were given injections of efocaine at the conclusion of the operation. Varying techniques were used. . . . (a) Local infiltration, (b) baminobenzoate 5%, propylene glycol 78%, sodium Peri-incisional infiltration, (c) Intercostal nerve block, (d) Paravertebral nerve block, (e) Anorectal infiltration. . . . In the 54 major surgical cases the results were excellent in 34, good in 13, fair in 4, and poor in 2, and failure in 1. In the 25 minor surgical cases the results were excellent in 19, good in 6. The mean duration of the anaesthesia produced was 8.4 days. In all these procedures there was no evidence of toxicity or of local tissue reaction. No slough or abscess resulted from the use of this preparation, and no interference with wound healing could be observed when compared with the controls. . . .

"This preparation appears to be admirably suited to the needs of the physician for the control of pain, and in those instances in which prolonged anaesthesia is indicated. . . ." H. E. Devlin, M.D.

Book Review

Orthopaedics With a Section in Neurology in Orthopaedics, by M. Beckett Howorth, M.D., Clinical Professor of Orthopaedic Surgery, New York University, Post Graduate Medical School. W. B. Saunders Co., 1952, First Edition.

This book is an earnest attempt to present the study of diseases of the neuro-musculo-skeletal system on a broad biological foundation. The author is a distinguished teacher of under-graduate and post-graduate orthopaedic students. The book begins with an outline of the history of orthopaedics in relation to surgery from pre-historic times, and traces its significant development up to the present. There is a section on anatomy and physiology of the musculo-skeletal system, emphasizing surface anatomy in the living subject. This is a useful approach to the succeeding chapter on examination and diagnosis.

The author has been fortunate in his association with other Specialists in the writing of individual chapters, among which is a chapter on diseases of the nervous system affecting the musculo-skeletal systems. The osteochondroses, such as Legge-Perthe's Disease, slipped femoral epiphysis and Kohler's Disease, and Freiberg's Disease, are included in a section on vascular diseases, and is a very reasonable attempt to classify these conditions etiologically.

A section on dynamic posture, which is an enthusiasm of the author is useful and well illustrated. The management of obesity in Orthopaedic conditions is dealt with in a realistic fashion.

A chapter on psychological considerations in Orthopaedic Surgery would be a definite addition to a book of this type, and it is regrettable that hysteria has been omitted entirely from the index.

There will be individual variations of opinion about details of treatment. For instance, it is not widely believed that removal of the head of the humerus is good treatment for any fracture of the surgical neck of the humerus, and the suggestion of surgical fusion of an area of the vertebral column for localized Marie Strumple's Disease, would appear to have very little rationale to recommend it.

There are very complete bibliographies following each chapter, which will greatly facilitate further study by interested students.

The book is very clearly written, and well illustrated. It should be a very useful source of information for students of Orthopaedic Surgery, and Orthopaedic Surgeons. It will also be a useful book of reference to General Practitioners for Orthopaedic subjects.

W. B. MacKinnon.

Editorial

J. C. Hossack, M.D., C.M. (Man.), Editor

The President-Elect

All his friends will be glad that Dr. Burns has been chosen to head the C.M.A. His enthusiasm and pleasing personality make it certain that his year of office will be a successful one. Those who remember the energy and devotion to his duties that he applied during his term of service as President of the M.M.A. will know that he will show similar qualities in the high office which he has now attained.

Not only do his colleagues throughout the Province wish him well but, more to the point, stand ready to do all they can to make his efforts successful.

The Convention

The programme as it now stands is well balanced and the speakers have been well chosen. We urge you to plan to attend. Dr. Macfarland is prepared to supply anyone who needs a substitute with a locum tenens. The meeting will last for four days and every day will be both profitable and pleasant.

Help for Addicts

According to the newspapers Vancouver is about to do something sensible for drug addicts. The plan to establish a centre for treatment is not original. Beyond doubt such a plan is in operation elsewhere. Certainly it has been advocated in these pages not once but several times.

The enormous cost in dollars of tolerating addiction is probably not the sole incentive to do something about the problem, but in the news item that expense is stressed. Actually the cost in money is the least important. It is the cost in ruined hopes, ruined homes, ruined careers, ruined lives that is important for in every form of value it is incalculable.

Ever since the passage of the American "Harrison Act" addicts have been looked upon as criminals and treated as criminals. Imagine the howls of protest that would arise were cancer patients to be treated by confinement in prison. Even the stupidest layman would be up in arms were such the case. If it is palpably absurd, then, to treat one disease by incarceration why should it be logical to employ such treatment in another disease?

Because addiction is a disease. The winds of adversity blow bitter upon the psychologically shorn and we, who should long ago have seen to

their tempering, have done nothing effective to temper them. Many doctors are afraid to deal with addicts lest they fall foul of the law. We have been too prone to accept the conclusion that addiction is by itself evidence of criminality. And so, of all patients, alone of all patients, addicts are unwelcome even to the point of their being harshly ordered to take themselves elsewhere.

But whither can they go? For all other distressing and continuing illnesses there is some place where the sufferers can get adequate and kindly treatment but there is no haven of refuge for these most unhappy and most miserable of mortals: no place, that is, except the jail.

All addicts are not criminals. But if there is anything that will drive men and women (and, worse still, youths and maidens) into a life of crime it is addiction to one of those sharp two-edged swords which have wrought so much good, when put to proper use, and so much harm when abused.

On the same page with the announcement of what was afoot in Vancouver was the story of a girl of 16 who prostituted herself in order to secure money so that she and her lover might buy their drug. There, but for the grace of God, goes many a daughter. And there, unfortunately, is the prototype of many hundreds of daughters who have loved not wisely but too well or have been lured to their destruction by men and women whose lust for gold makes them crueler than any beast of the jungle.

Is it not patent to everyone that the prohibition of anything only leads to the fostering of appetites that might never have been roused? The prohibition of liquor led to excessive debauchery. To ensure the sale of a book nothing is more effective than to ban it. To say "Thou shalt not" is tantamount to an invitation to indulge in practices that otherwise would have been given no second thought.

There was a time when anyone could get opium easily and then addiction was unspectacular and unusual. Old ladies with "rheumatics" got their supply of laudanum merely by asking for it. It was openly displayed on every druggist's shelf. One signed a book, told what the medicine was being used for and that was all. There was no especial profit in its sale. There seldom is when things are easy to get.

But now that they are banned many drugs sell at a premium and at a terrific premium. To sell these forbidden things means a quick and large

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fortune. One sells for a dollar what he has bought for a cent. "The descent to Avernus is easy." It does not take long to develop curiosity into craving. One can easily afford a few free samples to ensure a multitude of sales. The abnormal appetite grows by what it feeds on. There is no fear of sickening from excess. The demand grows, and with it the revenue of the trafficker, and with it the need for more and more money when already there is not enough.

No wonder then that the addict turns to crime. How can one get hold of an **extra** five to ten thousand dollars every year unless he steals it somehow? It is ridiculous to attempt to cure any disease while its cause continues to flourish. This is realized in the attempts being made to control the traffic. But would it not be logical to do something to prevent the development of the habit or to destroy it where it has developed?

That, it seems, is what is being planned for Vancouver.

The establishment of special clinics in other cities is desirable, for it would defeat the trafficker and destroy the traffic. There is a need for such a clinic here, and, inasmuch as the facilities are also here, one should be established. Cure may be difficult but it is not impossible. The dog does not always return to his vomit or the pig to its wallowing in the mire. The addict, especially the young addict, should arouse sympathy not antipathy. No one, not even the sufferer from cancer more greatly needs our help; and we deny our Oath when we refrain from doing all we can to give that help.



Winnipeg Medical Society

A special meeting of the Winnipeg Medical Society was held on Friday, May 30th. The special speaker for the evening was Mr. G. F. Gibberd, M.B., M.S. (Lond.), F.R.C.S. (Eng.), F.R.C.O.G. His topic was: "Toxaemia, Hypertension and Chronic Nephritis associated with Pregnancy." Mr. Gibberd is Consulting Obstetrician to Guy's Hospital and also to Queen Charlotte's Maternity Hospital, London, England. He is the first Sims/Black Professor for the Royal College and at present is travelling throughout the Commonwealth.

Mr. Gibberd's talk was a very well-presented summary of the different ways in which the various toxaemias occur during pregnancy. Each case history was accompanied by an illustrative slide showing the course of the blood pressure and the urinary findings. It was evident that the meeting was very much enjoyed by those present, and the comment during the discussion was entirely favourable.

Social News

Reported by K. Borthwick-Leslie, M.D.

The boys all report a wonderful time, in spite of the "God of Elements" at the Banff meeting. Congratulations to Dr. C. W. Burns who was elected president elect of the Canadian Medical Association for 1952-53, which, of course, means plenty of grief for him as President in 1953-54. Dr. Harold Orr of Edmonton, is the bearer of the burden and honor for this year.

Dr. Geo. Brock was elected President of the Canadian Dermatological Association at their annual meeting in Montreal with Dr. Arthur Birt as the secretary.

There must be other appointments and honors bestowed on our members but am afraid I missed 'em. Sorry—Guess I was too busy being an "Old Timer" at the Morden Reunion to read papers. Was that fun!! It was grand to see, in action on the old stamping ground, Drs. Lynn Falconer, Edmonton; Tony Scott, Jimmie George, along with all the non-medical gang. Depressing though, to have old friends trying to identify "that face" usually with the remark, "Sure I know that face, but there seems to be so much more of it!!"

The opening of the new hospital was highly successful and interesting, and is it a honey!! Digby will have to compete if he is going to make St. Boniface any more modern than Morden. It was fun to watch Dr. Adam Menzies and his bride receive personal congratulations in the receiving line.

Dr. C. R. Donovan was elected as the first President of newly formed Manitoba Public Health Association.

Fame of permanent calibre has been announced for Dr. C. E. Corrigan. The publication of his article on "Tumors" has been incorporated in the latest edition of the Encyclopedia Britannica, appearing over the signature C. E. Cg. Look for it, it's worth the effort.

Dr. Louise M. Hokanson, Selkirk, Man., a 1952 graduate, left July 1 to assume her duties in charge of the Ethelbert Hospital, Ethelbert, Man.

P. H. Decter, M.D., F.R.C.S. (Eng.), announces that he has resumed the practice of Orthopedic Surgery at the Manitoba Clinic, Medical Arts.

The Manitoba Clinic also welcomes Alexander Lindsay, D.O.M.L., recently of Glasgow, Scotland, as Ophthalmologist.

Welcome also to Dr. and Mrs. P. Cleave, residents of Neepawa since 1919. They will live in St. James, and Dr. Cleave is, I believe, opening his office in the Medical Arts. Welcome and good wishes.

Dr. and Mrs. W. A. Shaver with family will be moving to Fergus Falls, Minnesota, where they will make their new home.

Unfortunately I missed my call from Dr. Robert Cook who was in town briefly, but by the secretary grape vine, he reports that Norm Merkley complete with family, packed in with household goods, arrived safely and promptly in New York. Bob had a suite ready for them, on the same street as their apartment, and all are busy and happy. I gather the Cook family is just on holidays, and will be returning to New York.

Dr. and Mrs. C. M. Strong have returned from their two months' tour of Ireland and England and the Continent. They enjoyed every moment, having a wonderful trip, but as Con says—"How broke."

Dr. and Mrs. F. C. A. Walton, who now reside in New Westminster, B.C., are holidaying with Dr. and Mrs. Charles Walton at their summer home, Whytefold Beach.

Squadron Leader W. Hampson, son of Mr. and Mrs. G. Hampson, has been posted to R.C.A.F. Station, Winnipeg, having completed the rugged para-rescue course successfully.

Dr. Stan Argue and wife Marj called me last week, en route East. They are still in Hanna, Alta., and sound just as they did in the General Hospital interne days. They hope to stop for a few days on the return trip.

They have gone!! July 3rd Dr. J. W. McLeod and his wife, Dr. Jessie McGeachy, with Wendy and Peter, left by motor for Saskatoon where they will take up residence. Dr. McLeod will take over his duties as dean of medical sciences, University of Sask. Shortly before their departure, the Medical Women of Manitoba honored Dr. Jessie at a very successful party and presentation. Dr. Leonora Hawirko loaned her new home for the occasion. If the general feeling of regret at their leaving us is any indication of a successful future they will do all right.

Dr. John Hillsman left by motor last week, on a lone wolf tour of the States. He planned on inspecting from A to Z the Collins Radio Factory in Cedar Rapids, where all that queer equipment he has originates, then to Wisconsin, etc. I believe he will be back about the end of July.

Dr. and Mrs. Glen Hamilton and family have returned from their vacation in California. At present they are located at Mrs. Hamilton's parents, Mr. and Mrs. Ellis, Beaverbrook St., and at Loni Beach.

I had a note from Dr. Don Wright, having announced last month re his move to Aylmer, Ont., from Dryden, Ont. To renew acquaintances he is a '48 Grad and cordially invites all ye old pals to drop in whenever they are in the East. Thanks for writing, Don.

Dr. and Mrs. Wendell Simpson announce the engagement of their daughter, Patricia Ann, to Glenn Clark, only son of Mr. and Mrs. Frank Clark, Napanee, Ont. The wedding to be Saturday, August 9th, in Rosedale United Church.

Miss Muriel Sibbald, daughter of Mr. and Mrs. J. H. Sibbald, Evanson St., flew from New York to Belfast, Ireland, where on June 20th she became the bride of Dr. R. A. Sprenger. Dr. Sprenger has been doing post-graduate work in London, England.

Dr. and Mrs. Gordon Steenson, Ashern, Man. (nee Edith Button, R.N.), announce the arrival of their son, Robert Gordon.

Dr. and Mrs. James Morison (nee Doreen MacDonald), are happy to announce the birth of their son, Charles Robert, June 20, at Bethlehem Hospital, The Hague, Netherlands.

In Washington, D.C., Mary Elizabeth House and Dr. Eggert Thomas Feldsted were married on June 7th in St. Alban's Parish Church. Following a reception in the Holiday Room of the Westchester, the young couple left by motor through the southern Pacific States. They will be at home in Vancouver after July 1, where Dr. Feldsted is Radiologist and administrative director of the B.C. Medical Research Institute associated with the Vancouver General Hospital.

June 21 in King Memorial Church, Elva Jean Waldon, eldest daughter of Dr. and Mrs. H. V. Waldon, Vita, Man., plighted her troth to Paul Nibbelink, son of Dr. and Mrs. B. Nibbelink, Kalamazoo, Mich. The bride is a graduate of North Western University School of Music, the bridegroom a graduate in Journalism at North Western and now completing his studies in Law.

In Harstone United Church, July 5th, Eileen, daughter of Dr. and Mrs. W. C. Handford, became the bride of Robert S. Chapman. Following the wedding reception at the home of Dr. and Mrs. Handford, Ruby St., the young couple left by motor through the States. I believe they are at present back home for a visit prior to leaving for Fairview, Alberta, where they will reside.

Dr. and Mrs. J. R. Stratton, Killarney, Man., proudly announce the arrival of Judith Leslie, June 19, a sister for Jill.

Dr. and Mrs. D. E. Bradley announce the birth of Anne Marie at Reston, Man., Baby sister for Barry and Glenn.

Dr. and Mrs. Harold Colburn announce the birth of Colleen Margaret, June 22. A sister for Kathleen Anne.

Grace United Church, July 2, was the site of the marriage of Muriel Ashby and Dr. Pearson Griggs of Griswold, Man. Following the ceremony Dr. and Mrs. Griggs left for Ottawa and Quebec City, sailing July 7th for London, England, where they will reside.

June 28th Westminster Church was the scene of the marriage of Winnifred Anne Rossini to Dr. Charles MacKay Burns, elder son of Dr. and Mrs. C. W. Burns. Dr. and Mrs. Burns, Jr., left for the Lake, prior to a trip to Chicago and on to Toronto, where they will reside.

Historical

45 Years Ago

Prospecting in Manitoba is not limited to the unsettled areas of the north. Even the most refined cellars and basements of unlikely looking buildings may yield a strike. Such a find has recently been reported in a dingy corner of the stack room of the Medical Library, where under layers of dust and in an atmosphere redolent of the proximity of cadavers, the withered volumes of the Western Canada Medical Journal were recently discovered. To many who read these lines, the aforementioned title may awaken memories of their professional past, may even annihilate the years that have passed by recalling vividly and with proximate awareness events that occurred almost half a century ago. To others, however, the title means nothing, but a review of the volume in this collection may be of some interest to those who now practise in their prime.

The first issue of 43 pages is clothed in a dull grey cover, the face of which proclaims its title in red and black letters superset over the elaboration "A monthly journal of medicine, surgery and allied sciences." "Vol. 1, January, 1907, No. 1" was "today" to our colleagues of 45 years ago. Beneath the title is enumerated the contents, the first item being of striking significance. Then follows a strip in capital letters, "ONE DOLLAR A YEAR" and finally, "Winnipeg, Manitoba, Canada."

The material opens with an article evidently written specifically for the inaugural number. It is entitled "Note on the Use of a Medical Journal"—Wm. Osler, M.D., F.R.S. (Eng.), Oxford. Every word is vital but pressure of space permits only representative quotes, namely,

"Hearing of a proposal to start a new medical journal, the question that at once suggests itself is—Is it worth while? What should be the objects of a medical journal in a comparatively new country? In the first place it should serve as a medium of communication between the different provinces. Secondly, it should direct the policy of the profession. The third and most important use is as an organ for the publication of the work of men in the North West. And lastly, the journal should have a wide and sympathetic outlook on all the problems relating to the profession of the Dominion, regarding them from the standpoint of Canadians and not simply through provincial spectacles. I am sure I express the feelings of our colleagues in the older provinces and in Great Britain when I wish you God-speed in your new work."

On what more auspicious and erudite leading article could any newly born journal hope to em-

bark its ambitious career. Our medical library appears to harbour no earlier medical journals published in Winnipeg. Was this then the first? Did it have a predecessor that foundered? No reference is made to the existence of such in any of the numbers perused.

The next article is by a man much admired throughout the surgical world, one of the founders of the Manitoba Medical College and who lent his name (still used) to a specific surgical procedure. "The Typic or Anatomic operation for the Radical cure of Oblique Inguinal Hernia." By Alexander Hugh Ferguson, M.D., Chicago, Ill. Again one quotes, "The key to the radical cure of oblique inguinal hernia is suturing of the internal oblique muscle to the inner aspect of Poupart's ligament, as low down as possible, and without undue tension, after having ablated the sac and strengthened the internal ring with a few stitches above the root of the cord. We are gradually coming to the conclusion that after operation patients are usually kept in bed for too long a time, but I still enjoin three weeks in the horizontal position after an operation for the radical cure of hernia. The results are all that could be wished, there being no known return in 2,500 patients operated on by different surgeons."

The third article—and one can imagine the Editor planning his inaugural number—does not concern the third of the noble triad, namely Obstetrics, but makes one think that the social customs of those times may have influenced the topic chosen. It is entitled, "Mental Degradation the Result of Alcohol," by Robert Jones, M.D., F.R.C.S. (Eng.). The subject matter is rather depressing and your reviewer found it necessary to pour himself a small one while he struggled through the dissertation.

Next appears a case report, "A case of undetected myocarditis," by J. T. Fotheringham, Assoc. Professor of Medicine, Toronto University. As if to refute the sermon on the previous article, the author states, "of drugs I should be inclined to mention the following in what is perhaps their order of importance, alcohol, especially in acute cases. . . ."

The section on Clinical Reports includes "Per-nicious Anaemia," by Dr. Nicholls, Edmonton. "Case of Cerebral Thrombosis," by Dr. C. G. Mason, Calgary. "Case of Duodenum Ulceration," by Dr. J. McKee, Killarney.

Then comes the Editorial Page. The Editorial and business offices were located at 8 Commonwealth Block, Winnipeg, Canada, P.O. Box 450. One is unable to gather the specific factors that led to the establishment of this journal. The

Editor appears to take it for granted that all his readers are aware of the antecedent conditions. "Our circular letter was sent to the medical men from the Great Lakes to Victoria. We found that it was not just at Winnipeg, or at Calgary, or at Vancouver, or at Victoria that the need was felt, but all through the west. And when we note that Alberta has lately formed its first Medical Council to the College of Physicians and Surgeons, that the Teachers of Northern Alberta have decided to inaugurate as soon as possible a provincial university. By the help of the local editors we have made the start. We are resolved to give space to no advertisement that would not be in keeping with a high class medical journal."

It appears that the Western Canada Medical Journal inaugurated medical publications in and throughout the whole of Western Canada. But in the first number one notes a glaring omission—there is no mention of the editor's name. Subsequent numbers reveal this mystery—but for the moment let us refrain from disclosing.

Page 28 is headed "Reports of Medical Societies." In Vancouver they discussed "the use of the Giant Magnet" and "opsonins." They were concerned about Lodge practice and contract work, patent medicines, life insurance fees, etc.

In Winnipeg "the annual meeting of the Winnipeg Medical Association was held at the Medical library rooms. (? where was that). President, Dr. Bell, was in the chair. After the annual reports had been read the following officers were elected for the ensuing year: President, Dr. E. W. Montgomery; 1st Vice-President, Dr. J. R. Davidson; 2nd Vice-President, Dr. N. J. McLean; Secretary-Treasurer, Dr. C. H. Vrooman; Councillors, Drs. McKenty, H. MacKay, Galloway and Todd. Dr. Bell the returning (? retiring) president then gave his address **at the close of which he invited the members present to a supper at the Mariaggi** (Child's, Moore's, Fort Garry, Don Carlos combined) (Italics mio—will Dr. Arthur Childe please take notice?)

Fort William and Calgary report active scientific and business sessions.

Page 31 initiates "Reports from Local Editors."

Victoria reported "24 candidates presented themselves for examination. 15 were ordered to be registered." (And they think we are tough!)

Nelson doctors "have bound themselves to make no examinations for life insurance companies that do not pay the standard fee for B.C., \$5.00, for examination."

Edmonton elected its first Medical Council.

Calgary—"in 1902 there were 10 men practising here, while today there are 35."

Neepawa—"During the season of 1906, 36 typhoid cases have been treated in the Neepawa General Hospital, with one death."

Deloraine—"Anyone desiring information concerning the Canadian Mason's Mutual Life Insurance Association should contact Dr. Thornton."

Fort William had 647 cases of typhoid fever in 14 weeks. (Population, 8,000).

Manitoba Medical College had just inaugurated its new course of five years. The enrollment was 140 of whom 35 were entering their first year.

Under General Medical News

we note the following items:

"There is now in Winnipeg one of the Victoria(n) order nurses, Miss McCullough. While no non-paying patient is refused, a fee of 5 to 10 cents is collected for each visit. Miss McCullough made as many as 118 calls last month."

"Virden Hospital was opened Oct. 9th."

Marriages

"Dr. Thomas Glendinning Hamilton, of Elmwood, Winnipeg, was married to Miss Lillian May Forrester, niece of Mr. Donald Forrester, Winnipeg."

Personals

"Dr. Creighton of Melita, left Dec. 1st for England, where he will take a post-graduate course in the Metropolitan hospitals."

"Dr. Hassard, Sidney, Man., is suffering from a slight attack of fever."

"Dr. Galbraith, Lethbridge, has been appointed Mayor."

"Dr. J. R. Jones of Winnipeg, had a very serious accident Nov. 29th, being thrown from his sleigh. We are glad to hear that he is gradually recovering."

"Dr. J. H. Wiloughby was a guest at the Regina Hotel on the night of the fire. He managed to escape safely."

"Dr. Fred Hart, of Barrie, Ont., has started practice in Winnipeg."

Appointments

"Dr. A. B. Alexander was appointed physician to the Winnipeg St. Andrew's Society."

"Dr. Galloway, Winnipeg, has been appointed Lecturer in Orthopaedic Surgery to the Manitoba Medical College."

Two and a half pages of reviews of medical journals conclude the subject matter of the Journal. Three pages of advertising follow in which we are informed that "The Empire, Canada's Standard Typewriter," sells for \$60. A nurses' registry, 375 Langside St., Phone 3450, Day and Night, Registrar, Miss S. McKibbin. A small ad is entitled "Riverview, Winnipeg's Most Beautiful and Restricted Residential District. LOTS ARE ALL 50 by 120 feet. Prices from \$14 to \$25 per foot on GOOD TERMS." So far so good—one pictures the established young doctor pondering the erection of a home for himself in that Beautiful District. But alas, our dreams vanish at the insinuation, unbelievable to think of it occurring in

our 1907 g.p.'s implied in the next line—"Best Money Maker in the City." How many of our presently retired doctors reacted to this ad?—Were the promises of the Editor flouted in his very first number?

So ends Number 1, Volume 1.

The cover of Vol. 1, No. 2 of the Western Canada Medical Journal for February, 1907, carries a new and added announcement to the effect that the Journal has been "entered according to Act of the Parliament of Canada . . . by the Publisher at the Department of Agriculture, Ottawa. All rights reserved." One may ask why that particular Department—why was it considered the appropriate one to register medical journals?—farm almanacks yes, but the W.C.M.J.?

The leading article in No. 2 is entitled "The effect of sunlight upon white men (with special reference to Conditions in the West)" by Rev. Charles H. Heustis, M.A., Edmonton, Alta., read before the Edmonton Medical Society. The reverend author in 13 pages warns us against the evils of too much sunlight. He is of the opinion that Southern Alberta sunshine is as deleterious as that of the tropics, for it produces "First, increased metabolism and consequent larger excretion of carbonic-oxygen: Next, nervous exhaustion due to over stimulus. Remember too that blond people more quickly succumb than dark. . . . Lastly, it is doubtful whether persons of very light complexion should attempt to live in the West. To be a true inhabitant of Alberta one needs to have the complexion of a Cree or a Stoney."

And the remedy for this evil? "A siesta at mid-day" is essential. Schools should close at 1 p.m. We should dress in white over black undergarments. "Ladies should confine afternoon calls to the later hours—between 4 and 7 in the winter and in the summer these functions should be vacated" . . . "the habit of some women of going out in the daytime with neck and shoulders covered by a mere network is dangerous." Presumably it's all right after dark. The good cleric closes by inviting discussion and criticism—and does he ever get it, later on.

Then follows 6 more pages on Mental Degradation the Result of Alcohol—continued from the previous number. And to balance the material, there follows a surgical discussion on "Displacement of Stomach as a cause of Indigestion," by W. Soltan Fenwick, M.D., F.R.C.P., Physician to the Royal Temperance Hospital, London. Are we wrong in suspecting a note of high moral sermonizing in this new literary papoose of the West? Is this to be continued or will there somewhere sometime be printed an account of a Medical Students Annual Dinner?

The Editorial deals with the proposed question of Reciprocity of Licensure, both between the

provinces and with England. An editorial note however . . .

"We have to report that "All goes well." Climatic conditions have been against us preventing some from receiving their journal and us from receiving reports, etc., in time for this issue." Surely the printer could have found an extra comma to insert after the first "us," or had the editor indulged in a slight rebellion against his highly moralistic contributors? Local Editors now include Dr. Matheson, Brandon; Dr. Kineham, Dauphin; Dr. Thornton, Deloraine; Dr. Poole, Neepawa; Dr. Nichols, Edmonton.

At Winnipeg Dr. Chown read a paper on "Gall Stones," and Dr. Galloway exhibited a machine for the convenient and rapid manufacture of plaster of Paris bandages.

A most satisfactory revival of the Calgary Medical Society was due chiefly to the unique plan of electing officers semi-annually in order to stimulate interest.

Contagious diseases in Calgary for 1906 amounted to typhoid 77, all others 127.

Winnipeg's death rate was 16.138 per 1,000 (Population 100,000).

The Nurses Home in connection with the Winnipeg General Hospital was formally opened on 1st of February. Miss Wilson, Lady Superintendent, and Dr. Campbell, Medical Superintendent, received the guests.

"We hear that hospital abuse has begun in Montreal. People with means going there for advice." So that's where it started!

"Dr. Gunne, M.P.P., Dauphin, will again be the Party's candidate."

"Dr. Wright's office, and home at Oak Lake, Manitoba, have been burned."

"Dr. Stewart of Newdale, who is removing to B.C., has disposed of his practice to Dr. Kippen."

"Dr. Bigelow has moved from Hartney to Brandon."

"Dr. Leney, Winnipeg, was married on the 19th of December to Miss Shearer, Bloomfield, Pennsylvania."

Births . . . "On December 18th, 1906, the wife of Dr. Wm. Turnbull, Winnipeg, of a son."

English Obstetrical Bags, made of best selected cow hide with REMOVABLE LINEN LININGS were on sale at Stevens & Sons, 60 Princess St., Winnipeg. Price \$5.50.

The Walker, Canada's Finest Theatre, announces the forthcoming production of MADAM BUTTERFLY, with an Orchestra of 60. Prices \$3, and \$2 and \$1. Reduced Rates on all railroads.

Number 3 of Volume 1 embodies an innovation, and a very laudable one in that the leading article is by home talent namely, "Primary Intra Dural Tumors of the Optic Nerve" (with Report of a Case), by W. Harvey Smith, M.D., Professor of

Clinical Ophthalmology, Manitoba Medical College. It is a most excellent article, the first in the Journal to be illustrated by four remarkably clear photographic reproductions.

Displacement of the Stomach digests 15 more pages. The third major article comes this time from Marseilles, France, and is entitled "Recent Developments in Urinary Analysis and Semeiology." (Symptomatology). This paper offers newer methods of urinalysis to provide diagnosis, plans of treatment, etc., for the general practitioner. It is suggested that Western Canada, with few laboratories, should find urinalysis a suitable pastime for doctors because of the climate, "with its long winters and consequent inducement to indoor occupations." Nevertheless the repeated phrases "low excretion of chlorides," "high phosphorus output" and "enormous excretion of urobilin," strike modernly familiar notes.

The editorial page urges fuller reciprocity between provinces, not only to facilitate change of location but to counter the patent medicine racket and the bringing of mischievous law suits against the doctors. To this end appears the first letter to the Editor, from Andrew Croll, M.Ch., M.D. (Edin.), of Saskatoon.

The Regina Medical Society . . . "decided to renew the agreement of last year in connection with lodge practice."

Schering Grant of New TB Drug

Selected hospitals throughout the world have been offered an important grant of three million tablets of Ditubin, Schering Corporation's brand of the new antitubercular compound of isonicotinic acid hydrazides. Of this amount, 150,000 was allotted to Canada. This grant will answer the immediate need for clinical confirmation of the new drug, which aroused intense public interest after its disclosure by the Sea View Hospital, New York, a few months ago. Large-scale clinical investigations into the therapeutic effects of the new compound will thus be made possible. It is expected the results will aid in establishing a proper course of treatment in tuberculosis therapy. In making the announcement, Dr. Edward Henderson, Schering's Director of Clinical Research, recalled that Schering has been doing extensive research on antitubercular compounds for several years. Among those specially studied have been isonicotinic acid hydrazide, "on which," he added, "our pharmacological research is quite complete." In making the announcement, Dr. Henderson further stated that the grant supplied for clinical

In Winnipeg the number of cases of typhoid was 1,841 for 1905, of whom 138 died and in 1903, 1,426 of whom 109 died.

"R. A. Bonner, at the last (Manitoba Medical) Students' Association Meeting gave a very instructive lecture, one very good point he advocated was the appointment of medical experts by the government." Note—the Medico-Legal Society of Manitoba was formed just 45 years later.

"We are pleased to see that Dr. Clingan of Virden, was victorious in suit brought against him for mal-practices in connection with treatment of a fractured leg. The judge gave his decision in favor of the defendant, Dr. Clingan, for the total amount of his account."

"Dr. Bird, Broadview, Sask., has been appointed mayor of that town."

"Dr. Harvey, Qu'Appelle, has received the appointment of Medical Advisor to Piapot's Muskowpetungs and Pasqua's Reserves vice Dr. Kalbfleisch, resigned." Can someone please enlighten us?

This number proudly announces the inauguration of a service of "GRATIS information regarding travel to any part of the globe," by the transportation department of the Western Canada Medical Journal.

Did our colleagues of those days frequent the lower latitudes in the long winters as is the current custom?

investigation will permit a six-month's study of 2,500 patients. Schering's large supplies of Ditubin, isonicotinic acid hydrazide, which made this wide grant possible, are due not only the company's years of research, but also to a fortunate position with respect to critical materials. The prime ingredient, isonicotinic acid, is currently being used in another Schering product, Prantal, a recently introduced anticholinergic compound whose recognition as a superior treatment in peptic ulcer led the Company to acquire a large supply of the compound.

Schering's Director of Clinical Research further pointed out that inasmuch as recent medical reports have caused widespread interest in the new drug, it was felt that, in accordance with Schering's long established policy, qualified investigators should have the opportunity to give it careful study. "It is our belief, however," he added, "that although the amount donated for study is perhaps unprecedented, the largest possible number of hospitals should be allowed to evaluate this new chemotherapeutic agent, in order to obtain conclusive results in as short a time as possible."

Association Page

Reported by M. T. Macfarland, M.D.

Report of the M.M.A. Nominating Committee

In accordance with the Constitution and By-laws of the Association, the Nominating Committee met on May 28th, 1952. The following slate of officers was proposed for the year 1952-53:

President	C. W. Wiebe, Winkler
First Vice-President	W. F. Tisdale, Winnipeg
Second Vice-President	R. P. Cromarty, Brandon
	R. W. Whetter, Steinbach
Honorary Secretary	J. B. Baker, Brandon
	F. G. Stuart, Winnipeg
Honorary Treasurer	Ruin Lyons, Winnipeg
Rural Member at Large	G. T. McNeill, Carberry
	A. L. Paine, Ninette
Winnipeg Member at Large	L. A. Sigurdson, Winnipeg

The Report of the Nominating Committee was adopted by the Executive Committee on resolution which was duly seconded and carried. Candidates were contacted by mail and agreed to allow their names to be placed before the Annual Meeting. Provision is made in the Constitution and By-laws for the submission of other names for each or every office, prior to voting by ballot.



Letter To All C.M.A. Members

July 15th, 1952.

Dear Doctor:

Nineteen hundred and nineteen people who journeyed to the Banff Springs Hotel and the Chateau Lake Louise during the week of June 9th, 1952, made the Eighty-third Annual Meeting of the Canadian Medical Association one of the most notable in its history.

With superb setting, a well-balanced programme and a kindly disposed weatherman, the Convention just had to be a success.

But there were other happenings, too, which, in retrospect, make this Meeting not only memorable but something which should give every member a sense of pride and satisfaction.

Your General Council, with one hundred and ten delegates present from the ten Divisions, came to grips with the medical problems of Canada in a statesmanlike manner.

We all know—perhaps some of us vaguely—that such things as medical economics, public relations, hospital accreditation, voluntary plans for medical care, undergraduate and postgraduate medical education, national and international obligations—are of much concern to Canada's doctors.

We also know that Canadian citizens, including politicians, are, in increasing numbers, taking more than a casual interest in what we have been pleased to call "our business." We cannot, and should not, ignore these facts. And your General Council, with full appreciation of its obligations to every one of our nine thousand members, determined that all of the problems which face us must be met intelligently and effectively.

We have an excellent Journal which reflects the best efforts of Canadian Doctors, but with constantly rising costs we find that the Journal will cost \$125,000 to produce in the coming year.

The hospitals of Canada require inspection and accreditation. A Joint Commission of the Canadian Medical Association, the Canadian Hospital Council and the Royal College of Physicians and Surgeons of Canada is being set up to help every hospital in Canada to improve its standards and usefulness. There is every likelihood that this will cost the C.M.A. between \$15,000 and \$20,000 next year.

One year ago your Association founded the Trans-Canada Medical Services—a Federation of the Voluntary Prepaid Medical Care plans sponsored by our Divisions. The movement was commended in the House of Commons by the Prime Minister of Canada. Our hope is that this may prove to be the answer to National Health Insurance. Our contribution to the effort is \$8,000 for this coming year—a small price to pay for a very worthy purpose.

Medical economics, the study of our economic and social welfare, will cost us \$10,000 next year. And there is every possibility of this sum being considerably increased.

The truth of the matter is that new projects demanding more staff, and increased costs of our many activities call for a budget in the coming year of \$75,000 more than our present revenue from members' fees and advertising would produce.

What is the answer? Your General Council, without a dissenting vote (there were a few abstentions), decided that our annual fee would have to be increased to \$20.00, effective January 1st, 1953.

Our present fee of \$10.00 a year is exactly what it was in 1922—thirty years ago. A look at National Medical Association fees around the world discloses that they have in most instances increased 100% or more in the last few years.

But your General Council didn't increase the fee because we were out of date or out of line—not at all. Your General Council, after long and

careful debate, decided that the fee simply had to be increased if the Association is to do the job which every member expects it to do. And we must not fail.

Your General Council is confident that you and all other members will recognize that the Canadian Medical Association is the voice of Canadian Medicine. The Association belongs to you and you to it. We send you this letter now in order that you may be fully informed of the vital necessity of increasing the Association's revenue. We hope that, when your Provincial Division, a few months hence, approaches you for annual dues for 1953, we will have your continued support.

Yours sincerely,

Harold Orr, President.

Edward S. Mills, Honorary Treasurer.

Norman H. Gosse, Chairman of General Council

T. C. Routley, General Secretary



Medical Parley is no Vacation

Calgary Herald, June 14, 1952

Mention the word "convention" to a person and he immediately thinks of wild parties, lots of relaxation and a minimum of work.

But couple the word with the Canadian Medical Association and anyone who knows will tell you that just the reverse is true.

A bellboy, for instance, at the Banff Springs hotel here or Chateau Lake Louise or in any other of the hotels in Banff will tell you that the 1,400 doctors who jammed into the resort hotels worked, and worked hard.

The only item on the agenda of the five-day convention—which ended Friday—that could be called relaxation was a golf tournament.

And then the weatherman, with an all-day rain Thursday, sent the doctors from every Canadian province back to the lecture rooms.

The amount of work delegates got through was colossal. For the statistically minded, actual hours spent listening to lectures and sitting in on general meetings amounted to 87 hours over the five-day period. Not much time for wild parties there.

The convention itself was actually split into three parts: The general council meetings, the general session and scientific gatherings.

The first dealt with business and the other matters affecting the Canadian Medical Association

and was deliberated by the governing body of the organization.

The second, the general sessions, were meetings attended by all the medical men and consisted of talks by specialists and other expert doctors.

The third group, actually many groups meeting in many places at once, some as far apart as the ball room at the Banff Springs hotel and Chateau Lake Louise, heard papers presented by specialists of interest to that particular group. Round table discussions were included in this division too.

Another factor which observers noted and commented on was the ease and clarity with which the medical men expressed themselves.

This applied not only to the written addresses but to the scores of men who spoke from the floor during the meetings on a variety of subjects.

The stumbling, cliché-filled speeches of most convention were missing, with the ordinary general practitioner speaking in a way which was as easy to understand as the most carefully written address given by a specialist skilled in classroom lecturing.

Most important decision to come out of the convention was the backing by the association of Trans-Canada Medical Services, an organization which plans to offer a voluntary, prepaid, contributory medical care plan.

It has been unofficially stated that the plan is being put forward by the association as an alternate to a national, compulsory government scheme. More, it is, an effort by the medical men themselves to help the citizen meet the high cost of sickness.

The doctors emphasized, however, that the high cost of sickness was mostly caused by rising hospital costs and drugs and not the fee charged by the doctor.

Another highlight of the convention was a panel discussion, open to all delegates, on medical press public relations. Four doctors and two newspapermen made up the panel.

It was generally agreed by all that relations between the press and the medical men had not been good in the past and that an effort should be made to rectify this situation.

An indication that the medical profession was already doing something along these lines was that for the first time in 83 years the press was admitted to general council meetings.



Department of Health and Public Welfare

Comparisons Communicable Diseases — Manitoba (Whites and Indians)

DISEASES	1952		1951		Total	
	April 20 to May 17, '52	March 23 to April 19, '52	April 22 to May 19, '51	March 25 to April 21, '51	Jan. 1 to May 17, '52	Jan. 1 to May 19, '51
Anterior Poliomyelitis	0	0	2	0	0	3
Chickenpox	91	81	181	123	552	773
Diphtheria	0	0	1	0	1	5
Diarrhoea and Enteritis, under 1 yr.	11	16	12	10	47	66
Diphtheria Carriers	0	0	0	0	0	1
Dysentery—Amoebic	0	0	0	0	0	0
Dysentery—Bacillary	1	5	2	0	11	10
Erysipelas	2	0	1	2	7	10
Encephalitis	1	0	0	2	1	2
Influenza	31	29	21	88	80	755
Measles	184	127	383	417	623	2319
Measles—German	3	1	2	0	9	25
Meningococcal Meningitis	1	2	1	0	7	12
Mumps	91	143	127	156	720	856
Ophthalmia Neonatorum	1	0	0	0	1	0
Puerperal Fever	0	0	0	0	1	0
Scarlet Fever	79	74	151	84	358	530
Septic Sore Throat	4	16	0	1	41	9
Smallpox	0	0	0	0	0	0
Tetanus	0	0	0	0	1	0
Trachoma	0	0	0	0	0	0
Tuberculosis	91	62	124	116	279	407
Typhoid Fever	0	0	0	1	0	1
Typhoid Paratyphoid	0	0	0	0	0	0
Typhoid Carriers	0	0	0	0	0	0
Undulant Fever	1	0	1	0	1	6
Whooping Cough	11	22	23	38	151	198
Gonorrhoea	107	101	82	81	481	439
Syphilis	10	12	16	12	48	74
Jaundice (Infectious)	2	4	0	0	16	0

Four-week Period, April 20th to May 17th, 1952

DISEASE (White Cases Only)	*771,815 Manitoba	*861,000 Saskatchewan	*3,825,000 Ontario	*2,952,000 Minnesota
*Approximate population				
Anterior Poliomyelitis	2	—	—	1
Chickenpox	91	98	2090	—
Diarrhoea and Enteritis under 1 yr.	11	5	—	—
Diphtheria	—	—	—	9
Diphtheria Carriers	—	—	—	—
Dysentery—Amoebic	—	—	—	1
Dysentery—Bacillary	1	3	2	22
Encephalitis Epidemica	1	—	—	1
Erysipelas	2	—	—	—
Influenza	31	2	1	14
Infectious Jaundice	2	5	62	10
Measles	184	350	2055	507
German Measles	3	119	797	—
Malaria	—	—	—	1
Meningitis Meningococcal	1	1	7	3
Mumps	91	182	2747	—
Ophthalmia Neonatorum	1	—	—	—
Puerperal Fever	—	—	—	—
Scarlet Fever	79	124	137	148
Septic Sore Throat	4	18	—	19
Smallpox	—	—	—	—
Tetanus	—	—	—	—
Trachoma	—	—	—	—
Tularemia	—	—	1	1
Tuberculosis	91	36	97	209
Typhoid Fever	—	—	3	—
Typh. Paratyphoid	—	—	3	—
Typhoid Carrier	—	—	—	—
Undulant Fever	1	—	4	—
Undulant Fever	1	—	4	—
Whooping Cough	11	59	90	5
Gonorrhoea	107	—	198	—
Syphilis	10	—	72	—

***DEATHS FROM REPORTABLE DISEASES**

For the Month of May, 1952

Urban—Cancer, 53; Influenza, 1; Pneumonia Lobar (490) (491-493), 3; Pneumonia (other forms), 7; Pneumonia of newborn (763), 1; Tuberculosis, 13; Infectious Hepatitis (092) (&764), 2; Diarrhoea and Enteritis (571.0), 1. Other deaths under 1 year, 18. Other deaths over 1 year, 174. Stillbirths, 11. Total, 203.

Rural—Cancer, 19; Influenza, 7; Pneumonia Lobar (490, 491-493), 1; Pneumonia (other forms), 6; Pneumonia of newborn (763), 2; Tuberculosis, 6; Diarrhoea and Enteritis (571.), 2. Other deaths under 1 year, 15. Other deaths over 1 year, 173. Stillbirths, 16. Total, 204.

Indians—Influenza, 2; Pneumonia (other forms), 3; Syphilis, 1; Tuberculosis, 2; Whooping Cough, 1. Other deaths under 1 year, 6. Other deaths over 1 year, 2. Stillbirths, 0. Total 8.

Comment

Poliomyelitis is chiefly of note because no cases have been reported to date.

Diphtheria—Only one case reported and it is doubtful.

Typhoid Fever—None.

This leaves only the old stand-bys of chickenpox, measles, mumps and scarlet fever.

Tularemia—At date of writing there has been considerable disease among the muskrats in several marshes and we have had one case of tularemia reported. All doctors practising in areas where trapping of muskrat, beaver and rabbit is common should be on the lookout for this disease.

Rabies—A great deal of rabies is being reported in animals in Minnesota and North Dakota, mainly in skunks. I doubt if the skunks bother about the international border and here again the doctors along our southern border should be on the lookout for possible infection.

Department of Health and Public Welfare

Comparisons Communicable Diseases — Manitoba (Whites and Indians)

DISEASES	1952		1951		Total	
	May 18 to June 14, '52	April 20 to May 17, '52	May 20 to June 16, '51	April 22 to May 19, '51	Jan. 1 to June 14, '52	Jan. 1 to June 16, '51
Anterior Poliomyelitis	1	---	---	2	1	3
Chickenpox	167	91	179	181	719	952
Diphtheria	---	---	---	1	1	5
Diarrhoea and Enteritis, under 1 yr.	5	11	14	12	52	80
Diphtheria Carriers	---	---	---	---	---	1
Dysentery—Amoebic	---	---	---	---	---	---
Dysentery—Bacillary	---	1	2	2	11	12
Erysipelas	1	2	4	1	8	14
Encephalitis	---	1	---	---	1	2
Influenza	24	31	8	21	104	763
Measles	173	184	190	383	796	2509
Measles—German	1	3	---	2	10	25
Meningococcal Meningitis	1	1	3	1	8	15
Mumps	78	91	106	127	798	962
Ophthalmia Neonatorum	---	---	---	---	1	---
Puerperal Fever	---	---	---	---	1	---
Scarlet Fever	57	79	181	151	415	711
Septic Sore Throat	4	4	5	---	45	14
Smallpox	---	---	---	---	---	---
Tetanus	---	---	---	---	1	---
Trachoma	---	---	---	---	---	---
Tuberculosis	80	91	122	124	359	529
Typhoid Fever	---	---	---	---	---	1
Typhoid Paratyphoid	---	---	---	---	---	---
Typhoid Carriers	---	---	---	---	---	---
Undulant Fever	1	1	---	1	2	6
Whooping Cough	13	11	30	23	164	228
Gonorrhoea	104	107	79	82	585	518
Syphilis	9	10	13	16	57	87
Infectious Jaundice	4	2	---	---	20	---
Tularemia	2	---	---	---	2	---

Four-Week Period, May 18th to June 14th, 1952

DISEASES	*776,541 Manitoba	*861,000 Saskatchewan	*3,825,000 Ontario	*2,952,000 Minnesota
(White Cases Only)				
*Approximate population.				
Anterior Poliomyelitis	1	3	1	8
Chickenpox	167	177	2041	---
Diarrhoea & Enteritis, under 1 yr.	5	2	---	---
Diphtheria	---	1	---	2
Diphtheria Carriers	---	---	---	---
Dysentery—Amoebic	---	---	---	6
Dysentery—Bacillary	---	1	8	15
Encephalitis Epidemica	---	---	1	---
Erysipelas	1	---	4	---
Influenza	24	119	8	8
Infectious Jaundice	4	5	45	5
Malaria	---	1	---	8
Measles	173	367	2183	742
Meningitis Meningococcus	1	3	4	6
German Measles	1	111	891	---
Mumps	78	301	2176	---
Ophthal. Neonat.	---	---	---	---
Puerperal Fever	---	---	---	---
Rocky Mountain Spotted Fever	---	---	---	1
Scarlet Fever	57	87	105	100
Septic Sore Throat	4	11	5	15
Smallpox	---	---	---	---
Tetanus	---	---	---	---
Trachoma	---	---	---	---
Tularemia	2	---	1	3
Tuberculosis	80	35	120	254
Typhoid Fever	---	---	---	---
Typh. Para-Typhoid	---	7	1	---
Typhoid Carrier	---	---	---	---
Undulant Fever	1	1	4	---
Whooping Cough	13	35	123	15
Gonorrhoea	104	---	199	---
Syphilis	9	---	54	---

DEATHS FROM REPORTABLE DISEASES

For the Month of June, 1952

Urban — Cancer, 63; Influenza, 1; Pneumonia, Lobar (490) (491-493), 3; Pneumonia (other forms), 10; Pneumonia of Newborn, 1; Tuberculosis, 4; Late effects of acute infectious encephalitis, 1. Other deaths under 1 year, 18. Other deaths over 1 year, 188. Stillbirths, 22. Total, 228.

Rural — Cancer, 25; Influenza, 1; Pneumonia, Lobar (490) (491-493), 2; Pneumonia (other forms), 10; Tuberculosis, 9; Whooping Cough, 2; Infectious Hepatitis, 1; Diarrhoea and Enteritis under 2 years, 2. Other deaths under 1 year, 23. Other deaths over 1 year, 198. Stillbirths, 12. Total, 233.

Indians — Cancer, 1; Pneumonia (other forms), 4; Tuberculosis, 2. Other deaths under 1 year, 3. Other deaths over 1 year, 4. Stillbirths, 1. Total, 8.



Poliomyelitis—Only one case reported as at June 26th, 1952. The article from the J.A.M.A., reprinted in this issue, is well worth reading.

Venereal Diseases—Gonorrhoea shows a slight increase so far this year but syphilis is still showing a definite decline.

Tularemia—Two trappers had been working in the Delta marshes developed this disease. Since then one case has been reported from the Hodgson area. Blood tests on specimens from trappers, hunters, etc., do show past infection. No doubt there have been many cases who never saw a doctor or never were diagnosed.

Winnipeg Medical Society

Committee Reports

Report of the Secretary

To the President and Members of
The Winnipeg Medical Society:

IN MEMORIAM:

Moments of silence were observed in honor of those members who have passed away during the past term of office. They were Doctor Oswald J. Day of Winnipeg and Doctor Walter H. G. Gibbs of Selkirk.

MEETINGS:

During the past season your Council has held eight meetings. There were seven general meetings and one special meeting of the Society. One of the regular meetings was held at Deer Lodge Hospital, where elaborate and interesting displays were arranged by the staff of that hospital. The special meeting was held at the Fort Garry Hotel as part of the programme offered in the Refresher Course put on by the University.

UNITED NATIONS ASSOCIATION:

Representatives were named from this Society to the United Nations Association of Canada.

CIVIL DEFENCE:

A committee was appointed to work with the Civil Defence Health Services, and a great deal of work was done by our President and the Committee. Dr. Gordon Fryer, Medical Consultant to Civil Defence Health Planning Group, addressed one of the general meetings of the Society.

DENTISTS:

Our Society endorsed the principle of Fluoridation of the City's water supply, as recommended by the Winnipeg Dental Society.

AMENDMENTS TO CONSTITUTION

AND BY-LAWS:

Two amendments to the Constitution were passed by the Society. One of these altered the regulations governing the Nominating Committee, making it possible to name one or two candidates for the position of President, instead of always naming two, as was formerly the custom.

The second amendment concerned the method of dealing with the collection of arrears in membership fees.

MANITOBA HOSPITAL SERVICE ASSOCIATION:

The Society is organizing a group contract for its members with the Manitoba Hospital Service Association.

CANADIAN ARTHRITIS AND

RHEUMATISM SOCIETY:

The Winnipeg Medical Society went on record as approving the aims and principles of the Canadian Arthritis and Rheumatism Society.

All of which is respectfully submitted.

Marjorie R. Bennett,
Secretary.

Treasurer

To the President and Members of
The Winnipeg Medical Society:

Herewith certified financial statement from our auditors,
Messrs. Thornton, Milne and Campbell.

All of which is respectfully submitted.

K. Borthwick-Leslie,
Treasurer.

Winnipeg, 7th May, 1952.

To the President and Members,

The Winnipeg Medical Society,
Winnipeg, Manitoba.

Dear Sirs:

We have examined the accounts of the Society for the year ended 30th April, 1952, and submit herewith our report

thereon together with the following relative financial statements:

EXHIBITS:

- "A" Statement of Revenue and Expenditure for the year ended 30th April, 1952.
"B" Balance Sheet as at 30th April, 1952.

Revenue and Expenditure

The operations for the year, as set forth in Exhibit "A," have resulted in an excess of revenue over expenditure of \$2,159.76. Membership fees received are in accordance with duplicate receipts examined by us but are not subject to further verification. Adequate vouchers have been examined in substantiation of all expenditures.

In accordance with the minutes of the Council Meeting of 14th December, 1951, the sum of \$1,000.00 has been placed in the Special Library Fund for the use of the Library Committee of the Faculty of Medicine. A statement of the transactions affecting this account during the year is shown on Exhibit "A."

Balance Sheet

In our opinion the balance sheet submitted and marked Exhibit "B" is properly drawn up so as to exhibit a true and correct view of the state of the affairs of the Winnipeg Medical Society as at 30th April, 1952, according to the best of our information, the explanations given us, and as shown by the books of the Society. We have received all the information and explanations which we have required.

We obtained from the Bank of Toronto verification of the bank balances, subject to allowance for outstanding cheques as shown by the books.

As at 30th April, 1952, the Society's investments are as follows:

Par Value	Cost	Market Value
\$1,000.00 Government of Canada 3% 1957,	\$1,000.00	\$ 985.00
4,000.00 Government of Canada 3% 1966,	4,042.50	3,765.00
<hr/> \$5,000.00	<hr/> \$5,042.50	<hr/> \$4,750.00

These securities have been placed in a safety deposit box and were presented for our examination. All interest, on a received basis, has been duly accounted for on the books of the Society.

In so far as we have been able to ascertain all liabilities applicable to the year under review have been recorded on the books.

In conclusion, we wish to express our appreciation of the courtesies extended to us during the course of our audit.

Yours very truly,

THORNTON, MILNE & CAMPBELL,

Chartered Accountants.

Exhibit "A"

Statement of Revenue and Expenditure

For the year ended 30th April, 1952

General Funds

REVENUE

Annual Dues:	
Current Year—Active Members	\$3,340.00
Associate Members	14.00
Prior Year	154.00
	<hr/> \$3,508.00
Bond Interest	150.00
Less: Accrued Interest	4.68
	<hr/> 145.32
	<hr/> \$3 653.32

EXPENDITURE

Audit Fees	\$ 25.00
Bank Charges70
Catering	126.12
Donations	75.00
General Expense	61.85

for the Special Needs

OF THE OLDER PATIENT



Given health, the mature years can be a golden time — and to help keep the middle-aged and elderly well, GERIPLEX provides seven protective factors.

Each serves a purpose in combating vascular and metabolic disorders and preventing deficiency of important vitamins. There's rutin, for example, to combat excessive capillary fragility and permeability and other important vitamin components to assist the physiologic needs of the older patient.

Each GERIPLEX Kapseal® contains:

Rutin	25 mg.
Riboflavin (Vitamin B ₂)	5 mg.
Vitamin E	10 Int. units
Vitamin A	5000 Int. units
Vitamin B ₁ (Thiamine Hydrochloride)	5 mg.
Vitamin C (Ascorbic Acid)	50 mg.
Niacinamide (Nicotinamide)	15 mg.

Formulated specifically for the older patient, GERIPLEX simplifies vitamin therapy.

Dosage:

One Kapseal daily, at mealtime, is usually adequate though dosage may be increased by the physician in febrile illnesses, in preoperative preparation or during postoperative care, or whenever potentialities of vitamin deficiency states are increased.

GERIPLEX

TRADE MARK

**multivitamin preparation
to protect against
the aging process.**



Parke, Davis & Company, Ltd.

WALKERVILLE, ONTARIO

Lantern Slides Expenses	40.00
Man. Med. Association (Office Salaries)	900.00
Printing, Stationery and Postage	243.89
Telephone Expense	21.00
	1,493.56
Excess of Revenue over Expenditure	\$2,159.76

Library Fund**REVENUE**

Appropriated from General Surplus	\$1,000.00
Bank Interest	18.28
	\$1,018.28

EXPENDITURE

Books purchased	695.77
Library Supervision	240.00
	935.77
Excess of Revenue over Expenditure	\$ 82.51
	Exhibit "B"

Balance Sheet as at 30th April, 1952**ASSETS**

Cash:	
On Deposit with the Bank of Toronto	\$2,512.72
Investments—at cost:	
Government of Canada Bonds	5,042.50
	\$7,555.22

Special Library Fund:

Cash:	
On deposit with the Bank of Toronto	968.96
	\$8,524.18

LIABILITIES

Membership Fee Paid in Advance	\$ 10.00
Reserve for Entertainment Expense	45.80
	\$ 55.80

Surplus:	
Balance as at 30th April, 1951	\$6,339.66
Add:	
Excess of Revenue over Expenditure, per Exhibit "A"	2,159.76
	\$8,499.42

Less:	
Appropriated for Library Fund	\$1,000.00
	7,499.42
	\$7,555.22

Special Reserve—Library:	
Unexpended balance 30th April, 1951	886.45
Add:	
Excess of Revenue over Expenditure, per Exhibit "A"	82.51
	968.96
	\$8,524.18

Report of Trustees

To the President and Members of
The Winnipeg Medical Society:

As Senior Trustee, I wish to report the following securities as being held in Safety Deposit Box, Bank of Toronto, 394 Portage Avenue:

Dominion of Canada Bond, 3%, due 1st May 1957	\$1,000.00
Dominion of Canada Bond, 3%, due 1st September, 1966	\$1,000.00
Dominion of Canada Bond, 3%, due 1st September, 1966	\$1,000.00
Dominion of Canada Bond, 3%, due 1st September, 1966	2X\$500.00 1,000.00
Dominion of Canada Bond, 3%, due 1st September, 1966	\$1,000.00

Balance on Deposit, Bank of Toronto, as at

April 30th, 1952

\$2,512.72

The aforesaid Bonds and Bank Deposit have been vouched for in Auditor's Report.

I have personally inspected the office equipment of the Society at 604 Medical Arts Building, the equipment in the Manitoba Medical College in the custody of the Caretaker, and Lantern in care of Mr. Gordon Axtell, and found them to be as listed herein:

Office Equipment at 604 Medical Arts Building:

1 Steel Filing Cabinet, 3 drawers; 1/3 Interest in Elliott Addressing Machine; 1/3 Interest in Mimeograph Machine; 1/3 Interest in Underwood Typewriter, 14" Carriage, Serial No. 5732553-14; 1/3 Interest in "Copy-right" Holder; 1/3 Interest in Burroughs Adding Machine.

Equipment in Manitoba Medical College in custody of Caretaker:

12 Wooden Chairs; 4 Wooden Trestles and 2 Wooden Table Tops for same; 32 Cups and Saucers; 1 Coffee Urn; 1 Gavel—This Gavel made from wood from the ruins of the Royal College of Surgeons and presented to the Winnipeg Medical Society by Dr. John C. Hossack; 1 Plaque—Honour Roll of Past Presidents (in Physiology Lecture Room of the Medical College). Book value \$218.64.

In Care of Mr. Gordon Axtell:

1 Delinescope Lantern, Model OJR, No. 3647, made by Spencer Wells Co. of Buffalo, New York, and one spare bulb for same. Value \$250.00.

B. Dyma,
Senior Trustee.

Membership Committee

To the President and Members of
The Winnipeg Medical Society:

The present total membership of the Society is 433, made up as follows:

Active paid-up members	340
Associate paid-up members	5
Non-Resident paid-up members	2
Life Members	19
Non-Active Members	5
Membership fees unpaid	62
	433

Eleven members left the province during the year, three of whom had paid their dues.

Fourteen names have been added to the membership roll during the current year.

Total membership 1950-51 was 446, as against 433 for the current year, a reduction of 13.

Total paid-up membership for 1950-51 was 371 compared to 347 for 1951-52, a loss of 24.

During the current year, that part of the Constitution entitled "Restoration" has been altered in order to facilitate the collection of unpaid dues.

It has also been agreed that all members who have been in good standing for the previous 10 years, upon attaining the age of 65 shall continue their membership without payment of further dues.

At present there are 24 paid-up members 65 years of age or over, and 4 members of the same age group who are not paid-up.

It has been recommended by Council that all members who receive no tax deduction from payment of dues shall be assessed half the regular annual fee. At present there are 23 members who belong to this category and 23 prospective members.

It is hoped that the changes and recommendations noted above shall facilitate the work of the Council and enable a clearer understanding regarding membership in the Society.

All of which is respectfully submitted.

David Swartz,
Chairman.

Programme Committee

To the President and Members of

The Winnipeg Medical Society:

During the season 1951-52 the Winnipeg Medical Society has held seven regular meetings and one special meeting. The regular meetings have in general been well attended.

Papers were presented by the following speakers: Doctors Alex. Gibson, F. G. Allison, Jeffery Morris, J. A. Wilt, I. W. Monie, H. Blondal, Ashley Thomson, and H. Medovy. In addition, two panel discussions have been held under the chairmanship of Doctors J. P. Gemmell and R. H. McFarlane respectively. The January meeting was, as usual, a hospital meeting and this year was most successfully run by the staff of Deer Lodge Hospital. One special meeting in conjunction with the Refresher Course of the University of Manitoba, Faculty of Medicine, was held in April, 1952, and the members were very fortunate indeed to hear excellent papers by Doctors C. M. Jones and A. W. Farmer. The regular meeting in April, 1952, was held in conjunction with a meeting arranged by the General Practitioners' Association, who had procured the Honourable Ivan Schultz to give a talk on Medical Health Care in England.

It is the opinion of the retiring chairman that having at least two round table and panel discussions during the year is a welcome break from the usual programme of formal papers, and that this policy should be adhered to in the future. Most assuredly, the hospital programmes each January have been a welcome change and are always well received, and it is also recommended that this be continued. The meeting in February of this year was under the auspices of the Pre-Clinical Years of the Medical College staff, and it is also felt that this should be made a policy for future years. The meeting in March of this year consisted of papers by members of the Department of Physiology and Medical Research. An attempt should be made in subsequent years to have the members of this Department take part in the programme of the Winnipeg Medical Society.

Appended is a short list of papers that would be available for the forthcoming session of the Winnipeg Medical Society. This is for the information of the new chairman of the Programme Committee. It is suggested that the programme of the Winnipeg Medical Society for the whole year could be arranged in October of that year and, consequently, those giving papers would have ample opportunity to prepare same and the executive committee would then be well aware of what programmes were coming up. This has the further advantage of reducing the work required of the Programme Committee. This policy was tried the past year and proved relatively successful.

As retiring chairman I would like to thank publicly all those who contributed to the programme during the past year, for their willing co-operation and the technical excellence of their presentations.

All of which is respectfully submitted.

Report of the Legislative Committee

A. B. Houston,
Chairman.

of Fifteen

To the President and Members of

The Winnipeg Medical Society:

No meetings of this Committee were held during the past year, since no controversial legislation was brought up in the local Legislature.

All of which is respectfully submitted.

Ross H. Cooper,
Representative.

Public Health Committee

To the President and Members of

The Winnipeg Medical Society:

There have been no serious epidemics during the year but there has been an increase of Communicable diseases. Influenza

has been more or less constantly reported with spring epidemic prevalence. Most of these cases are not reported and tabulated but there were 21 deaths attributed to influenza during the year as compared with 4 deaths the previous year. The influenza of 1951 was proven due to Influenza Virus A while the cases this spring have been shown due to Influenza Virus B.

A comparison of 1950 and 1951 communicable diseases reported in Winnipeg by the City Health Department:

	1951	1950
Cerebrospinal fever	13	3
Chickenpox	604	492
Diphtheria	3	9
Infantile diarrhoea	73	41
Bacillary dysentery	1	26
Erysipelas	12	13
Measles	935	442
Mumps	359	151
Poliomyelitis	16	7
Scarlet Fever	639	103
Pulmonary T.B.	75	67
Whooping Cough	143	95

Figures taken from report of Winnipeg City Health Department for 1951.

VITAL STATISTICS

	1951	1950
Infant mortality rate per 1,000 live births	21.0	26.4
Still births per 1,000 live births	17.0	20.0
Puerperal mortality per 1,000 live births	1.0	0.4
Death rate per 1,000 population	8.7	8.3

TEN LEADING CAUSES OF DEATH IN WINNIPEG FOR 1951

Heart diseases	704
Malignant tumors	355
Cerebral accidents (hemorrhage, etc.)	222
Accidental and Violent deaths	120
Arteriosclerosis	102
Infant diseases	92
Digestive systems diseases	49
Pneumonia	44
Diabetes	35
Nephritis	29

There has been no major epidemic requiring active participation of your representative during the past year in Winnipeg. Respectfully submitted.

T. H. Williams,
Chairman.

Report of Representative to Medical Library Committee

To the President and Members of

The Winnipeg Medical Society:

In 1951-52 43% of the Doctors in Winnipeg borrowed from the Library 1,200 books and 2,377 journals.

For six months the Library was open from 8 p.m. to 10 p.m., Monday through Friday with a student available to help find references. 435 books or journals were consulted during these hours.

During this session a book and periodical display of recent accessions was on view in the hall, with a librarian in attendance for half an hour before each meeting of Winnipeg Medical Society.

The Winnipeg Medical Society's contribution to the Library was increased from \$750.00 to \$1,000.00. With this money \$500.00 worth of new books was purchased, \$300.00 was spent on binding, and \$200.00 paid to students for evening library duty.

Respectfully submitted.

F. G. Allison,
Representative.

Report of the Representative to the Executive Committee of the Manitoba Medical Association

To the President and Members of
The Winnipeg Medical Society:

As you know, the Manitoba Medical Association Executive held monthly meetings from September, 1951, to May, 1951, all of them except the last two being held on Sunday afternoon. Your representative managed to attend all of them.

A wide variety of subjects pertinent to our problems was discussed but probably the one engaging the most attention was the Association's struggle with the Workmen's Compensation Board for an upward revision of medical fees.

The medical men of Manitoba have been operating under an absurdly low tariff of fees set by the Compensation Board. Efforts to try to induce these gentry to raise the fees have proved to be a task which makes the twelve labours of Hercules look like child's play.

The profession has been adequately kept in the picture by the issuance of a small booklet containing the correspondence between the Commissioner and the Association's Executive Secretary and more recently by a letter bringing them up-to-date on matters transpiring since the issuance of the booklet.

The latter contained two post-cards—one to be sent to the Commissioner and the other advising the Section's Executive Secretary that the other card had been sent. The response to this has been, I believe, satisfactory.

Other matters pertaining to the good and welfare of the profession at large, in the opinion of your representative, have been handled by the M.M.A. Executive with efficiency and dispatch.

Respectfully submitted.

Jack McKenty,
Representative.

Community Chest Campaign Committee

To the President and Members of
The Winnipeg Medical Society:

The canvass of physicians by the Winnipeg Medical Society for funds for the Winnipeg Community Chest was carried out again this year.

The doctors of the city were canvassed by twenty-eight of our members and on May 5, 1952, the Community Chest had received as a result of their efforts \$11,028.50. Our quota this year, calculated on the previous year's donations of \$10,641 with 14% added, was \$12,130. This means our group fell short of the quota by \$1,100.00.

I would like again to stress the importance of the executive of the Society making an early choice of their Committee for this work next year—in the summer months if possible—so that good lists can be prepared and canvassers chosen in order that the campaign may get an early start. In this way, considerable assistance can also be obtained from the Community Chest Office.

Respectfully submitted.

A. W. McCulloch,
Chairman.

Representative to Manitoba Medical Review

To the President and Members of
The Winnipeg Medical Society:

Since December, 1951, I beg to state that five meetings have been reported to the Manitoba Medical Review.

Among the papers read at the Society Meetings, those by Doctors H. Blondal, J. C. Wilt, Ian W. Monie, Ashley Thomson and Harry Medovy have been submitted to the Review for publication.

Murray H. Campbell,
Representative.

Section of Anaesthesiology

To the President and Members of
The Winnipeg Medical Society:

The Anaesthetic Section of the Winnipeg Medical Society has held eight regular monthly meetings during the 1951-1952 term, and one extra meeting in February, when Dr. T. H. Seldon of the Mayo Clinic, Rochester, Minnesota, was guest speaker.

Average attendance during the year has been eighteen.

Respectfully submitted.

Donalda M. H. Huggins,
Chairman.

Welfare Council of Greater Winnipeg

To the President and Members of
The Winnipeg Medical Society:

The Welfare Council of Greater Winnipeg has carried on a full programme during 1951 under four main committees. These are:

1. Child Welfare

This includes family services as casework, the family court and family bureau, housekeeping services for incapacitated mothers, etc. In their annual report, the request of this department is for more psychiatric consultation facilities.

2. Recreation

This comprises community centre projects, day camps, fresh air camps, physical fitness, neighbourhood houses and industrial recreation.

3. Health Division

Health Division is broken down into three standing committees as working units. These are:

(a) Rehabilitation

After the initial introduction of this work which I outlined at last year's annual meeting, the concrete addition is that in February, 1952, the committee submitted a brief to the Honourable Ivan Schultz, urging that the province undertake a survey of rehabilitation programmes and services for the civilian disabled. The brief was supported by data regarding the number of persons in this province who could benefit from a rehabilitation programme. The officers of this committee are anxious to have the active co-operation of the medical profession. Dr. Ian Maclean has been appointed as a liaison officer to this committee because of his special interest in and experience of industrial medicine. More will be heard from this committee later.

(b) Alcoholism

The Council was approached for help by a group of citizens interested in the work of Alcoholics Anonymous. This resulted in the formation of a committee under Mr. Justice Ralph Maybank. This committee is at present acting as an information centre. On the basis of actual data, in preliminary surveys, they estimate that there are probably over 10,000 alcoholics in Greater Winnipeg. Increased treatment facilities is the main objective of this committee.

(c) National Health Organization Committee

Under the chairmanship of Dr. Hugh Malcolmson, this committee has been working to draw together various local branches of national health organizations. Considerable concern and criticism has been directed at the recent emergence of numerous specific disease societies by responsible leaders in business and welfare circles. While there is a place for self-help organizations, a serious problem exists in attempting to prevent duplication of services; to secure maximum use of existing health services; and to urge reasonable methods of fund raising by such agencies. It will be recalled that the March of Dimes began under questionable auspices, but after investigation was re-organized on the present ethical basis.

4. Central Volunteer Bureau

This is one of the most vital elements in the work of the Council. Its work in 1951 has been concerned with senior citizens, civil defence and hospitality for service men. These

are the 18 and 19 year olds sent to Canada for training from Britain and Europe under NATO. The C.V.B. has a list of 214 hostesses on file for the entertainment of these boys in Canadian homes. In Civil Defence work, the block plan has resulted in 4,500 recruits.

New work of the Council in 1951 has been concerned with:

1. Re-organization of the Child Guidance Clinic on a Greater Winnipeg rather than a city basis.

2. A low rent housing plan for the city has been completed by the Metropolitan Town Planning Association. Lack of interest and action on the part of the city council to accept this plan has produced delay in building however, which likely will not be started by 1953.

3. A Western Regional Social Work Conference was held in Winnipeg in May, 1951, with a good attendance from the city, the province, and the part of Ontario at the head of the Lakes. A well arranged programme of lectures, seminars and demonstrations was presented to bring workers in the field up to date on recent advances in social work, and to create an atmosphere of cohesion in community work from a broad viewpoint.

4. A survey of kindergarten settlement work in the city was undertaken with recommendation for re-organization along the lines of a neighbourhood house. Rotary clubs and Junior League have been co-operating to raise money for this project. The Junior League has voted capital up to \$10,000 and a yearly grant of \$5,000 a year for three years to establish a neighbourhood house in the socially degraded area of C.P.R. and Notre Dame.

All the activities of the Welfare Council are mediated through the agencies with which we are familiar, and of which I presented a detailed account in the annual report to this Society in 1951. The function of the agencies is the direct result of the work of trained social workers. These workers are analogous to the practising physicians in the medical profession. A great blow has been dealt to this work by the abolition of the School of Social work in this university by the Board of Governors. Since this surprise decision was published as part of the budget paring policy of the University of Manitoba, an agonized hue and cry has arisen among social agencies and all citizens of allied interest. There are many details inappropriate to mention in this report, as the whole question of the school is a vexed one. Doubtless the one-year course was inadequate, but it was instituted to fill a need in this community, and by its work had become accredited by the American Board concerned with standards of Schools of Social Work. The aim should be to have a first-class two-year course in this university. The medical profession are the first group who should be behind this project. When a committee was formed in April of this year to investigate the decision, and bring in recommendations, your executive instructed me to forward a letter stating that the Winnipeg Medical Society regretted the abolition of the school, and recommended the establishment of an adequate two-year course. The recommendation of this committee was rejected by the Board of Governors and just today the Committee have placed the whole question before the Cabinet. They have indicated to the Government and to the Board of Governors where they can obtain \$39,000.00 for a new two-year school. The objection to this plan is that in addition there would be required sufficient money to finance the school for three years. The general deficit of the university was \$72,000.00. The deficit of the School of Social Work was \$27,000.00. Abolition of the school was decided as an economy measure.

Inability of this university to train social workers is a very serious state of affairs, as welfare agencies in Winnipeg and in the province will be dependent upon graduates from other schools, such as Montreal, Toronto and Vancouver, who already do not supply sufficient workers. In addition, there are particular features of social problems in a prairie province, which workers trained elsewhere are not as well qualified to deal with as would be those who could be trained here. There is something anomalous in this situation particularly as Mani-

toba is partaking in the present industrial boom in Canada. The city of Winnipeg is growing at the rate of more than 5,000 a year, and in the last year, forty-one new industrial plants have been started in Manitoba, with sixty new plants under construction.

Another blow to the Welfare Council this year has been the retirement of Mrs. Monica McQueen who has been executive director for eleven years. Under her wise guidance and able leadership the Council has reached its present state of efficiency and maturity in community service, and her departure will be a loss to the city. Her successor has not yet been appointed.

There is a possibility that some re-organization may take place in the structure of the Welfare Council this fall, which will provide for more active participation of the medical profession in relation to determining policy. If this is done, it might provide machinery for negotiating such important matters as the training of social workers, and safeguarding the existence of the whole school from events such as we have seen in the last two months.

Perhaps it is timely for the doctors to be willing to give some time and thought to active planning in social services and community affairs.

Respectfully submitted.

Jessie A. McGeachy,
Representative

Eye, Ear, Nose and Throat Section

To the President and Members of
The Winnipeg Medical Society:

Five meetings have been held by the Eye, Ear, Nose and Throat Section of the Society in the past year. Four of these meetings were confined to business of the Section, mainly revision of the present scale of fees.

On February 7th the Section was addressed by Messrs. Baillie and Arnold of the Highway Traffic Division of the Provincial Government. They presented a resume of the Highway Safety Programme with special reference to visual standards.

The final meeting of the Section will be held in May to elect officers for the ensuing year.

Respectfully submitted.

John E. Rose,
Secretary

Obstetrics and Gynaecology Section

To the President and Members of
The Winnipeg Medical Society:

No business meetings of this Section were held during the year. On February 29th, 1952, a dinner was held in honour of Dr. F. G. McGuinness, retired Professor of Obstetrics and Gynaecology.

Respectfully submitted.

C. C. Henneberg,
Secretary

Radiological Section

To the President and Members of
The Winnipeg Medical Society:

The Radiological Section held a few meetings in the past year. Resumes of conventions attended by members were given. Discussions were also held regarding the economics related to the specialty.

The Section also was actively interested in the bid for incorporation by the Manitoba Radiologists and its subsequent withdrawal.

A new Executive was elected for the forthcoming year:
Chairman, A. W. McCulloch
Secretary, M. K. Kiernan
Treasurer, W. J. Elliott

Respectfully submitted.

A. W. McCulloch,
Secretary

Benevolent Fund

The following report of the Society's Auditors, Messrs. Thornton, Milne & Campbell, was presented by Dr. P. H. Milne:

Winnipeg, 7th May, 1952.

Members,
The Winnipeg Medical Society Benevolent Fund,
Winnipeg, Manitoba.

Sirs:
We have examined the accounts of the fund for the year ending 30th April, 1952, and submit herewith our statement thereon:

Cash on deposit in the Bank of Toronto, 30th April 1951	\$2,418.75
Add: Receipts for the year	155.00
Bond Interest	\$ 45.00
Less: Interest purchased	9.33
	35.67
	\$2,609.42

Less: Disbursements	569.33
Balance, 30th April, 1952	\$2,040.09
Represented by:	
Cash on deposit in the Bank of Toronto	573.84
Government of Canada Bonds, 3%, 1966 (market value \$1,411.87)	
cost	1,466.25
	\$2,040.09

Donations received are in accordance with duplicate receipts examined by us. All disbursements made were under the signature of authorized signing officers of the fund.

Subject to allowance for an outstanding cheque as shown by the books, the bank balance is in agreement with a confirmation received from the Bank. The securities are lodged with the Bank of Toronto for safekeeping and were confirmed to us. All interest has been accounted for on a received basis.

Yours very truly,

THORNTON, MILNE & CAMPBELL,
Chartered Accountants.



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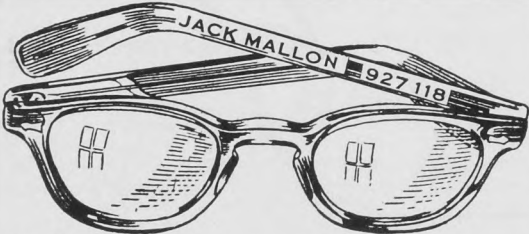
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